DOCUMENT RESUME

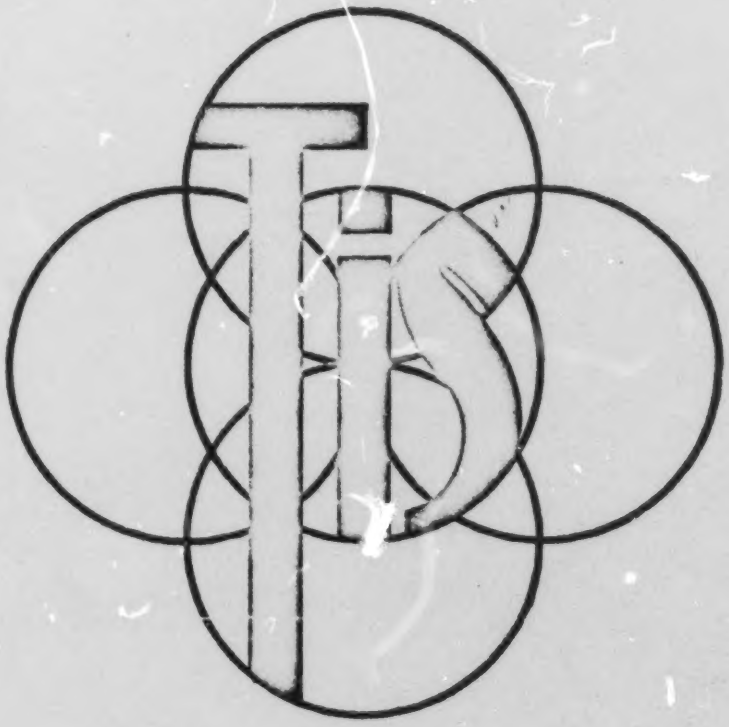
ED 088 477 IR 000 310

AUTHOR	Bennett, Ann; Brown, Carol L.
TITLE	Texas Information Service Educational Information Consultant Training Manual.
INSTITUTION	Texas Information Service, Austin.
PUB DATE	74
NOTE	165p.
EDRS PRICE	MF-$0.75 HC-$7.80
DESCRIPTORS	*Information Scientists; *Information Services; *Information Systems; *Manuals; *Professional Training
IDENTIFIERS	Educational Information Consultants; Educational Resources Information Center; EIC; ERIC; Texas Information Service; TIS

ABSTRACT

Three separate modules comprise this manual which is designed to train Texas Information Service/Educational Information Consultants. The first module focuses upon the Texas Information Service (TIS) project, the second upon the role of the Educational Information Consultant (EIC), and the third upon the Educational Resources Information Center (ERIC) system. Each module first specifies competencies and objectives and then provides background readings, materials and suggested activities. The modules may be used in the sequence presented, in a different order, or independently, depending upon the individual context. In addition, particular activities and materials may be extracted from the overall modules and employed for specific purposes. (Author)

ED 088477



TEXAS INFORMATION SERVICE
EDUCATIONAL INFORMATION CONSULTANT
TRAINING MANUAL

IR 000 310

ED 074771

TEXAS INFORMATION SERVICE
EDUCATIONAL INFORMATION CONSULTANT
TRAINING MANUAL

Dr. Ann Bennett
Consultant
Region 10, Education Service Center

Carol L. Brown
Information Specialist
Texas Information Service

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

Texas Information Service
6504 Tracor Lane
Austin, Texas 78721
512/926-8080

Acknowledgement

The authors wish to acknowledge their debt to The Educational Information Consultant Training Manual developed by the Far West Laboratory for Educational Research and Development, 1 Garden Circle, Hotel Claremont, Berkeley, California 94705. Many of the ideas and activities included in this manual are adaptations of EIC Training Manual materials and some papers have been taken directly from it. These papers are in most cases identified by "FWLERD 1/72" in the lower righthand corner.

CONTENTS

Guidelines for the Use of This Manual

Texas Information Service/Educational Information Consultants: Identified Competencies

Module: The Texas Information Service..... I

Module: The Texas Information Service Educational Information Consultant (TIS/EIC)..... II

Module: The ERIC System..... III

Appendix

GUIDELINES FOR THE USE OF THIS MANUAL

This manual was written for use in training Texas Information Service/Educational Information Consultants (TIS/EICs). The TIS project, the EIC role, and the ERIC system are presented in separate training modules. Each module includes objectives, background readings, materials, and suggested activities. The modules are placed in an order which seems appropriate to the authors, but may be presented in other sequences if that seems desirable. One or two modules may be used rather than the full set as each is basically self-contained. Every effort has been made to make this manual as flexible and as comprehensive as possible so that it may be adapted to specific needs. The trainer may choose to select a few activities or materials from the modules rather than use all the activities and materials suggested. In the appendix is a variety of informative materials which may be helpful to the TIS/EIC trainer.

TEXAS INFORMATION SERVICE/EDUCATIONAL INFORMATION CONSULTANTS (TIS/EIC) IDENTIFIED COMPETENCIES

This manual is designed to assist in developing the Educational Information Consultant Competencies listed below. A TIS/EIC should be able to:

1. Define and discuss the "knowledge linker" concept in education
2. Trace the historical background and funding sources of the Texas Information Service from July 1, 1971 - July 1, 1974
3. State and explain the goal and objectives of the Texas Information Service
4. Identify target audience populations of Texas Information Service
5. List available Texas Information Service resources
6. Name and discuss the services and products of the Texas Information Service
7. Describe the Texas Information Service organization structure and delineate the functions of the various Texas Information Service components
8. Plan and present a multi-media presentation explaining the Texas Information Service as a "knowledge linker" in the state of Texas
9. Explain how the Education Information Consultant functions as a linking agent between the Texas Information Service and educational practitioners
10. Discuss the personal and professional qualifications of the TIS/EIC
11. Delineate the duties and responsibilities of the TIS/EIC
12. Conduct an effective questioning negotiation session with a client
13. Evaluate the level of Educational Information Consultant/Client interaction during questioning negotiation
14. Deliver to the client in an effective manner the requested information

15. Use Texas Information Service record keeping forms correctly

16. Produce in schematic form the complete Texas Information Service search process

17. Explain the organization of the ERIC system, its process for the input of documents, and methods for locating specific documents in its index publications

18. Use the ERIC Thesaurus to locate appropriate descriptors for negotiated user requests

19. Organize ERIC descriptors into concept groups, using the "Main Ideas System"

20. Explain the principle of coordinate indexing and its relationship to computer retrieval of ERIC documents

21. Explain the Boolean logic operators, AND, OR, and AND NOT as they apply to computer searching of ERIC

22. Define and explain the significance of the retrieval process to the successful operation of a responsive information service.

MODULE: THE TEXAS INFORMATION SERVICE

Overview

This module includes background reading regarding the "knowledge linker" concept in education as well as suggested extended reading in the area. Information concerning the origin, funding sources and projected future directions of the Texas Information Service is offered in the module. Goals, objectives, services, products and the organization of the project are discussed and described. Overhead transparency masters to accompany the module are provided. A ten minute color slide/tape presentation produced by the Texas Information Service describing the project is available on loan from the Texas Information Service Central Staff office.

Objectives

This module is designed to assist in developing the Educational Information Consultant competencies listed below. A Texas Information Service/Educational Information Consultant (TIS/EIC) should be able to:

1. Define and discuss the "knowledge linker" concept in education
2. Trace the historical background and funding sources of the Texas Information Service from July 1, 1971 - July 1, 1974
3. State and explain the goal and objectives of the Texas Information Service
4. Identify target audience populations of Texas Information Service
5. List available Texas Information Service resources
6. Name and discuss the services and products of the Texas Information Service
7. Describe the Texas Information Service organizational structure and delineate the functions of the various Texas Information Service components
8. Plan and present a multi-media presentation explaining the Texas Information Service as a "knowledge linker" in the state of Texas.

A STATEMENT OF NEED--THE KNOWLEDGE LINKER IN EDUCATION*

The field of education today is faced with a serious dilemma: how to harness the output of the knowledge explosion so that this knowledge can be utilized to solve the demands being placed upon the education system. In 1964, Richard Carlson cited a weak knowledge base as one of the main problems in education.[1] Today, there is not a lack of available knowledge as exemplified by the ERIC information system. But there is a lack of utilization of educational research and successful practices which does tend to support Carlson's concept of a weak knowledge base.

The main reason for the lack of knowledge utilization in education is the gap which exists in the system of knowledge transfer. This proposal is premised on the need in elementary and secondary education for an institutionalized knowledge linker role which should be independent of the research and practice worlds.

PROBLEM

The process of knowledge transfer within the knowledge utilization system is inadequate due to this anonymity between developer and practitioner. Since the developer's function is to supply the practitioner with a working model for solving the consumer's problems, it is necessary to help the developer and the practitioner to be linked together so that communication can occur more directly.

The federal government has attempted to alleviate this lack of contact by instituting the R&D Centers. However, these have not solved the problem as noted by Harriet Feinberg in an evaluation of the R&D Center at Harvard.

> In the foreground, overshadowing any other problems is a large and obvious gap between the University (Harvard) and the participating school systems. Harvard Graduate School of Education appears withdrawn, highly research oriented as opposed to service oriented, and unresponsive to the everyday needs and problems of the school systems. The conventional research-development-dissemination model suggested by the Office of Education's description of the R&D Centers, whereby the results of basic research are transmitted into curriculum development, and eventually disseminated to school systems, is seriously questioned if not rejected.[2]

*Edited and condensed from a proposal submitted to the U. S. Office of Education by the staff of the Merrimack Education Center, 101 Mill Road, Chelmsford, Massachusetts, under the direction of Richard J. Lavin, Ed.D., 1971.

Attempts have been made to make research available to practitioners via the printed word, but most have failed as noted in a study by Lazarsfield and Sieber in which they found that only a small percentage of teachers read publications which contain research results.[3] The federal government has attempted to disseminate new knowledge to school personnel through the ERIC information system. However this program has not been utilized by educators as noted by Guba and Horvat.[4]

The result of this breakdown in the communication process between developers and practitioners has resulted in the lack of research utilization by school personnel as described by Carlson earlier in this paper and by Lazarsfield and Sieber in the following comment:

> Many teachers have little or no knowledge of the research that has been done in their field and are unaware that there are practical findings that could be applied to everyday work.[5]

The lack of utilization is compounded by the fact that even when a practitioner does know about research or has used it, the knowledge is not transferred even within the same school system as Coombs has observed:

> Even when research is undertaken in the setting of the local school, often the results are not transported even to neighboring systems.[6]

> School systems are seriously deficient in transmission processes for new and improved ways of working. Hundreds of successful classroom innovations are born to bloom unseen. Some get into journal articles, conversational reports, or books - but many are unknown even to other teachers in the same building.[7]

The problem is evident: how can we increase the utilization of research based knowledge by school personnel? This does not infer a forcing of research upon the practitioners but instead provides them with research results and successful practices which will enable them to evaluate their present situation and to determine if these new findings can help them to improve the learning of the consumers. The problem can be divided into subparts as follows:

1. Reduce the anonymity between developer and practitioner.
2. Target information to specific practitioner needs.
3. Increase the communication of research findings and successful practices between local practitioners.

Attempts to solve the above problem have not been successful in the past as noted earlier in this paper. New mechanisms or agencies are needed to bridge this gap in knowledge utilization.

The knowledge linker must assume an active role between the developer and the practitioner. He must go to the practitioner and discover what types of information are required. Then he must turn to the resource systems, which could be developers or other practitioners, and determine what information is available to meet these needs. Many times the information is not available in which case the linker can serve as an intermediary in a two step feedback channel to provide the developer with guidance for further research work.

There are three fundamental requirements that the linker must possess. These have been inferred in the writings of Havelock[8] and Lippitt[9] who are both located at the Center for Research on the Utilization of Scientific Knowledge (CRUSK) at the University of Michigan. First, the linker must be able to help the practitioner assess his needs. Before the practitioner can use information he must know specifically what his problems are. Second, he must have a knowledge of the resources which are available to solve the educational practitioner's problems. This will include not only the human resources of developers, consultants, and other practitioners but also printed resources in the form of research, successful practices, training programs, etc. Third, the linker must have access to these resources so that they can be made available to the practitioner. There may be nothing more frustrating to the practitioner than to know what his needs are, know what type of resources he needs, and then not be able to get them. These three requirements appear quite simple but as Havelock points out if the practitioner was able to perform all three of these activities himself he would not need a linker.[10]

There are several difficulties inherent in performing the knowledge linker role. These can be classified as follows:

1. Overload

2. Marginality

Overload can best be described as too much information to handle, too many people to get it from, too much processing to be done before it is useful, and too many people to give it to.[11] Marginality refers to the in-betweener position of the linker and the lack of precedence for the new role of "knowledge linker".

These two problems make it nearly impossible for an individual to fulfill the linker role. Farr states the following:

> What is obvious, however, is that educational linking cannot possibly be done by individuals alone but requires the resources and legitimacy of a rather comprehensive organization.[12]

The institutionalization of the linker role is not a panacea; however, it does provide the linkers within the institution with the following:

1. economic security due to the permanence of the institution

2. identity which reduces the marginality problem and may give the individual a feeling of being worthwhile

3. coordination so that the individual can specialize on only a few tasks but yet allow the multiple functions of the linking role to be accomplished, i.e., reduces the overload problem.

Farr argues for an impartial middleman since he believes the developer and practitioner are hindered in performing their roles as developers and as teachers and also decrease their effectiveness as linkers if they attempt to fill the role. The impartial no axe-to-grind middleman is able to maintain a certain trustworthiness and credibility attainable by no one else.[13] Havelock sums it up as follows:

> This linking institution could be based in a university or a school system but neither of these alternatives is entirely satisfactory. An independent base not identified with either the research world or the practice world is probably preferable. In any case, the institution will be expensive to operate if it is to be an effective linker and will, therefore, require federal support.[14]

The training required to prepare linking agents must include conceptual frameworks and specific skills which are aimed at satisfying the requirements of a linking agent as mentioned earlier in this paper. First, the individual must understand the framework of the knowledge utilization system and the types of processes that occur. The linker must also realize the inherent problems involved with the linker role and realize the need for a coordination of linker efforts to accomplish the task of bringing together practitioners and resources to meet the needs of the consumer. The individual must also develop diagnostic and facilitating skills to assist the practitioner in assessing his needs. Such skills would include how to ask the right questions and how to collect, process, and interpret data.

The linker must also know what types of resources are available and how to link these to the practitioner. To access such information he should understand knowledge storage and retrieval methods as well as where human resources are located (see Lippitt for a more detailed description of possible curriculum[15]).

Havelock suggests six types of tools which the agent should possess:

1. Linking strategies or project designs
2. Handbook of new practices, innovations, and usable research knowledge
3. Handbook on linking problems and solutions
4. Guide to the retrieval of knowledge
5. Simple instruments to measure the success of his dissemination and utilization efforts
6. Client self-diagnostic tools[16]

The knowledge linker organization staffed with these trained and equipped personnel will be able to work with a large number of practitioners from different school systems. In assisting the practitioners to assess their needs, a number of common needs will be recognized by the linkers. When the practitioners are made aware of this commonality, they may wish to form inter school system teams to develop programs for fulfilling the needs. The independent linking organization will be in an excellent position to facilitate the exchange of resources not only between developers and practitioners but also between practitioners. By working on a cooperative basis the school systems will also be able to solve the problems more economically than if they were working separately due to the sharing of resources in the designing and operation of programs. This cooperative effort to meet common needs between school systems is possible as shown by some of the exemplary Title III Centers in operation.

As noted earlier, an important function of the knowledge linkers will be the targeting of selective information to the practitioners which will require an active linker role. The key to the selective dissemination of information (SDI) is the matching of individual practitioner needs with specific information to meet these needs. The linker must continually search all available information sources in order to provide this match. This can be greatly facilitated by the use of computers but is also possible on a manual basis even though it is more time consuming. A regular program must be instituted to (1) monitor practitioner needs, (2) send the appropriate information to the practitioner, and (3) receive feedback as to the usefulness of the information in meeting the needs. The feedback from the practitioner is essential because it enables the linker to realize not only whether the practitioner has correctly identified his problem but also how the needs are changing.

NOTES

1. Carlson, Richard, "Barriers to Change in Public Schools," Change Processes in the Public Schools, Eugene, Oregon: The Center for the Advanced Study of Educational Administration, 1965.

2. Feinberg, Harriet, "Perspectives of the R&D Center," A report to the Policy Board of the Center for Research and Development on Educational Differences, Harvard University, 1966, p.4.

3. Lazarsfield, Paul, and Sieber, Sam, Organizing Educational Research, Englewood Cliffs, New Jersey: Prentice Hall Inc., 1964, pp. 58-59.

4. Guba, Egon, and Horvat, John, The Role of Educational Research in Educational Change, UNESCO Institute for Education, Hamburg, Germany, July, 1967, p. 93.

5. Lazarsfield, and Sieber, op. cit., p. 51.

6. Ibid., p. 51.

7. Watson, Goodwin, "Toward a Conceptual Architecture of a Self Renewing School System," in Watson, G. (ed.), Change in School Systems, Washington, D.C.: NTL Institute for Applied Behavioral Science, 1967, p. 109.

8. Havelock, Ronald, Planning for Innovation Through Dissemination and Utilization of Knowledge, Ann Arbor, Michigan: Center for Research on Utilization of Scientific Knowledge (CRUSK), 1969, pp. 7: 1-7: 39.

9. Lippitt, Ronald, "The Use of Social Research to Improve Social Practice," in Watson, G. (ed.), Concepts for Social Change, Washington, D.C.: NTL Institute for Applied Behavioral Science, 1967, pp. 71-80.

10. Havelock, op. cit , p. 7:21.

11. Ibid., p. 7:34.

12. Farr, Richard, "Knowledge Linkers and the Flow of Educational Information," An Occasional Paper from ERIC at Stanford, Stanford University: ERIC Clearinghouse on Educational Media and Technology, 1969, p. 7.

13. Ibid., p. 4.

14. Havelock, op. cit., p. 7:38.

15. Lippitt, Ronald; Watson, Jeanne; and Westley, Bruce, The Dynamics of Planned Change, New York: Harcourt, Brace and Company, Inc., 1958, p. 312.

16. Havelock, op. cit., pp. 7:39 - 7:40.

TEXAS INFORMATION SERVICE PROJECT

(Background Information)

During the past decade, major strides have been made in creating educational information services and in bringing these services to the attention of a large and growing user population. More and more educators are becoming aware of the need to be appraised of noteworthy and tested practices throughout the country in order to develop more broadly based programs of educational planning, implementation and evaluation.

In recognition of the high priority of this educational goal, the Texas Information Service (TIS) Project was funded July 1, 1971, by the Dissemination Task Force of the U.S. Office of Education to develop and field test information services for the Texas Educational Renewal Center (TERC) System. The model information service was piloted through six Education Service Centers and their selected project sites (Teacher Centers/and or other educational sites) across the state. The major project effort was to coordinate the central unit's information services with the dissemination activities of the participating ESC's and the Texas Education Agency. Following testing and revision of the model, services are now extended to other sites in Texas through the network of Teacher Centers and the system of 20 Regional ESC's.

Educational Information Consultants (after participating in a training program) function in TEA, the Teacher Centers, educational sites, and ESC's to provide linkage between the resources of TIS and user groups--administrators, teachers, and professional staffs of TEA, the ESC's, the Teacher Centers, and other sites. These consultants assist users in defining their information needs, refer requests to the central TIS unit (Austin) for computer and manual retrieval of relevant information, and deliver and assist in interpreting that information. Developmental assistance to users is provided through the liaison of the Educational Information Consultant with consultative staff members of TEA, the ESC's and participating project sites.

At the present time, 1973-74, the central TIS unit consists of a director, Mr. Charles Nix, TEA, two professionals with educational experience, Dr. Leo Lambert, Project Manager and Mrs. Carol Brown, Information Specialist, and a small clerical staff. Services provided are: manual and/or computer searches of TIS resources (including Texas programs), ERIC (RIE and CIJE); production of microfiche copy and printed copy; preparation of pre-packaged information materials on topics of current interest in Texas, distributed through ESC's, TEA, and Teacher Centers; identification of available teaching materials; and information

about and referral to consultants and exemplary programs in education. All TIS services are provided users at no or nominal cost until January 1974.

The Dissemination function of the United States Office of Education was transferred to the National Institute of Education (NIE) when the latter organization became operational in the fall of 1972. NIE has funded TIS for a third year, beginning July 1, 1973 and ending June 30, 1974. NIE has indicated that the 12 month period will be the final federal funding of the project. Beginning July 1, 1974, TIS must find other funding sources in order to continue and expand operations. A master plan for TIS funding is presently being prepared for approval by state and federal agencies.

THE TEXAS INFORMATION SERVICE

(An Overview)

GOAL: Through a system of delivery and feedback, to provide the information base for the development and installation of improved and innovative educational practices in the State of Texas in cooperation with the Texas Education Agency.

OBJECTIVES:

1) To devise means of efficiently and effectively meeting the information needs of TIS identified audiences.

2) To develop means of continually monitoring audience needs and ways of remaining responsive to these needs.

3) To utilize national, state, and local information resources and cooperate with existing information services.

4) To effect appropriate vehicles for delivery of information packages which will support educational change.

5) To plan, develop, test, and modify the system through which TIS will deliver information services in Texas.

6) To train service-oriented information specialists for the statewide delivery network of TIS.

7) To develop the bank of information resources which will enable TIS to meet the information needs of its clients.

8) To acquire the equipment necessary for the acquisition, storage, retrieval, and dissemination of information.

9) To support the design and implementation of a mechanism to evaluate the effectiveness of TIS in providing information to support the process of change.

AUDIENCES:

TARGET AUDIENCES	ROLES	POSITIONS
Teacher Centers	T.C. planners, trainers, consultants Participants in T.C. programs	Teachers Administrators Supervisors ESC Professional Staff College/Univ. staff Student teachers Paraprofessionals Community
Education Service Centers	Planners, consultants, trainers	Professional staff Teachers Administrators Supervisors Community, etc.
Texas Education Agency	Planners, consultants, disseminators	Professional staff
Individuals (Outside T.C.'s and ESCs)		Teachers Administrators Supervisors H.Ed. faculty Students (H.Ed.) Paraprofessionals Lay Groups School boards Industry Church, etc.

RESOURCES AVAILABLE:

1) ERIC materials
   ERIC microfiche files
   RIE resumes available via computer access
   RIE indexes
   CIJE
   Thesaurus of ERIC Descriptors
2) Miscellaneous Documents indexed using ERIC descriptors
3) CEDaR Catalog

4) ALERT; Westinghouse Learning Directory

5) 16 Educational journals

6) TIS on-shelf materials (hand-search bibliographies; prepackaged materials)

7) Brochures and newsletters

8) To be developed: a file of Texas program, product, and human resources

SERVICES AND PRODUCTS:

1) *Pre-packaging.* Packages of practical materials for teachers, administrators, teacher trainers, community members. Each package is on a topic of wide interest to educators in Texas. Packages include reference materials (bibliographies, materials lists, program lists) and substantive materials (summary and synthesis papers, journal article reprints, transparency masters). These packages have been distributed to all ESCs and TCs as well as TEA Resource Center Library. All packages have carried permission to reproduce any or all parts.

   Completed packages:

   Individualized Instruction--with an IGE Supplement

   Minicourses (materials on Minicourses 1, 2, 5, 8, 9)

   Quarter System in Texas

   Middle Schools

2) *On-demand searching and packaging.* When a request for an information search is received, TIS first determines the most appropriate search strategy. If specific in-house materials will not answer a request fully, TIS uses the computer program to search ERIC files. This computer search may be supplemented by a hand search of the TIS in-house resources listed above. Computer output of RIE resumes and documents from the in-house collection are reviewed and evaluated for relevance. Only materials relevant to the user's request are included in the package delivered to the user.

3) *Delivery of documents--MF and HC.* After the package has been delivered to the user, he may request through TIS microfiche copies of the full documents to which he has found references in his package. TIS will supply documents on microfiche (MF) free of charge. Paper copy (HC--hardcopy) of documents in the TIS collection may be borrowed or used at TIS offices. Paper copy of other documents and of journal articles cannot, at this time, be supplied by TIS. These must be ordered by the user from EDRS (ERIC Document Reproduction Service) or the publisher or borrowed through inter-library loan.

4) *Access to technical assistance.* When TIS files on Texas programs, products, and human resources have been developed, this information will be available on request. Also, information consultants (in ESCs, TCs, and TEA) will be asked to collect information regarding technical assistance available in the region or institutions in which they are located. Access to specialists and to programs in operation should be available to users considering implementation of a program or practice on the basis of information provided through TIS.

TIS ORGANIZATION AND FUNCTIONS:

The TIS network will consist of a central unit located in Austin and a delivery system network which will function through information consultants (part-time or full time) located in TCs, ESCs, and the TEA.

TIS Central Unit functions

1) Acquisition
   a) Acquire and maintain special collections and comprehensive reference collection.
   b) Coordinate and maintain statewide human and program resource files.
2) Retrieval
   a) Retrieve information to respond to requests received by information consultants in the statewide network.
3) Packaging
   a) Package information in areas of general concern (TIS prepackaged materials)
   b) Package materials to respond to individual user requests.
4) Coordination of state network
   a) Coordinate, evaluate, and publicize TIS network of resources and services.
   b) Identify statewide needs in cooperation with TEA.

Delivery system network functions (in TCs, ESCs, and TEA).

1) Provide interface between users and TIS resources through trained information specialists (problem definition, retrieval, and delivery of information).

2) Identify and evaluate local human, program, and printed resources for inclusion in the TIS resource bank (local and state).

3) Perform retrieval activities according to resources of the local center or transmit the request to the central office.

4) Maintain educational reference collection.

5) Identify needs of the local TC or ESC, and other local users; train users in problem identification and information utilization.

6) Perform followup services with users to determine efficacy of the service and uses to which information was put.

SUGGESTED MULTI - MEDIA MATERIALS

The following overhead transparency masters were designed to accompany the Texas Information Services (An Overview) material.

*The 10 minute color slide/tape presentation on the Texas Information Service is available on loan from Texas Information Service, 6504 Tracor Lane, Austin, Texas 78721 (512 - 926-8080, ext. 47).

TEXAS INFORMATION SERVICE PROJECT

GOAL: THROUGH A SYSTEM OF DELIVERY AND FEEDBACK, TO PROVIDE THE INFORMATION BASE FOR THE DEVELOPMENT AND INSTALLATION OF IMPROVED AND INNOVATIVE EDUCATIONAL PRACTICES IN THE STATE OF TEXAS IN COOPERATION WITH THE TEXAS EDUCATION AGENCY

T I S

O B J E C T I V E S :

1. To devise means of efficiently and effectively meeting the information needs of T I S identified audiences.

2. To develop means of continually monitoring audience needs and ways of remaining responsive to these needs.

3. To utilize national, state, and local inofrmation resources and cooperate with existing information services.

4. To effect appropriate vehicles for delivery of information packages which will support educational change.

5. To plan, develop, test, and modify the system through which T I S will deliver information services in Texas.

6. To train service - oriented information specialists for the statewide delivery network of T I S.

7. To develop the bank of information resources which will enable T I S to meet the information needs of its clients.

8. To acquire the equipment necessary for the acquisition, storage, retrieval, and dissemination of information.

9. To support the design and implementation of a mechanism to evaluate the effectiveness of T I S in providing information to support the process of change.

TIS AUDIENCE

TARGET AUDIENCES	ROLES	POSITIONS
Teacher Centers	T.C. planners, trainers, consultants Participants in T.C. programs	Teachers Administrators Supervisors ESC Professional Staff College/Univ. staff Student teachers Paraprofessionals Community
Education Service Centers	Planners, consultants, trainers	Professional staff Teachers Administrators Supervisors Community, etc.
Texas Education Agency	Planners, consultants, disseminators	Professional staff
Individuals (Outside T.C.'s and ESCs)		Teachers Administrators Supervisors H.Ed. faculty Students (H.Ed.) Paraprofessionals Lay Groups School boards Industry Church, etc.

TIS RESOURCES

1. ERIC MATERIALS
   ERIC MICROFICHE FILES
   RIE RESUMES AVAILABLE VIA COMPUTER ACCESS
   RIE INDEXES
   CIJE
   THESAURUS OF ERIC DESCRIPTORS

2. MISCELLANEOUS DOCUMENTS INDEXED USING ERIC DESCRIPTORS

3. CEDAR CATALOG

4. ALERT

5. WESTINGHOUSE LEARNING DIRECTORY

6. 16 EDUCATIONAL JOURNALS

7. TIS ON - SHELF MATERIALS (HAND - SEARCH BIBLIOGRAPHIES; PREPACKAGED MATERIALS)

8. BROCHURES AND NEWSLETTERS

9. TO BE DEVLOPED: A FILE OF TEXAS PROGRAM, PRODUCT, AND HUMAN RESOURCES

TIS SERVICES AND PRODUCTS

1. PRE-PACKAGING
2. ON-DEMAND SEARCHING AND PACKAGING
3. DELIVERY OF DOCUMENTS-- MF AND HC
4. ACCESS TO TECHNICAL ASSISTANCE

TIS CENTRAL UNIT FUNCTIONS

1. ACQUISITION

A) ACQUIRE AND MAINTAIN SPECIAL COLLECTIONS AND COMPREHENSIVE REFERENCE COLLECTION.

B) COORDINATE AND MAINTAIN STATEWIDE HUMAN AND PROGRAM RESOURCE FILES.

2. RETRIEVAL

A) RETRIEVE INFORMATION TO RESPOND TO REQUESTS RECEIVED BY INFORMATION CONSULTANTS IN THE STATEWIDE NETWORK.

3. PACKAGING

A) PACKAGE INFORMATION IN AREAS OF GENERAL CONCERN (T I S PRE-PACKAGED MATERIALS)

B) PACKAGE MATERIALS TO RESPOND TO INDIVIDUAL USER REQUESTS.

4. COORDINATION OF STATE NETWORK

A) COORDINATE, EVALUATE, AND PUBLICIZE T I S NETWORK OF RESOURCES AND SERVICES.

B) IDENTIFY STATEWIDE NEEDS IN COOPERATION WITH T E A .

DELIVERY SYSTEM NETWORK FUNCTIONS

1. PROVIDE INTERFACE BETWEEN USERS AND T I S RESOURCES THROUGH TRAINED INFORMATION SPECIALISTS (PROBLEM DEFINITION, RETRIEVAL, AND DELIVERY OF INFORMATION.

2. IDENTIFY AND EVALUATE LOCAL HUMAN, PROGRAM, AND PRINTED RESOURCES FOR INCLUSION IN THE T I S RESOURCES BANK (LOCAL AND STATE).

3. PERFORM RETRIEVAL ACTIVITIES ACCORDING TO RESOURCES OF THE LOCAL CENTER OR TRANSMIT THE REQUEST TO THE CENTRAL OFFICE.

4. MAINTAIN EDUCATION REFERENCE COLLECTION.

5. IDENTIFY NEEDS OF THE LOCAL T C OR E S C, AND OTHER LOCAL USERS; TRAIN USERS IN PROBLEM IDENTIFICATION AND INFORMATION UTILIZATION.

6. PERFORM FOLLOWUP SERVICES WITH USERS TO DETERMINE EFFICACY OF THE SERVICE AND USES TO WHICH INFORMATION WAS PUT.

The "Rain" of Educational Information

SERVICES OF TIS CENTRAL

by Dr. Leo Lambert
Project Manager
Texas Information Service Project

SERVICES OF TIS CENTRAL

The services and responsibilities of the TIS Central Unit are structured around its role as the basic information retrieval facility for the TIS System. The central office must acquire and maintain the resources and capabilities necessary to offer comprehensive educational information services to Texas educators. These services and responsibilities are carried out through four major activities: acquisitions, retrieval, packaging, and coordination of the state network.

Acquisitions. The TIS Central Unit has the responsibility for acquiring and maintaining a comprehensive resource bank of professional educational information. At present this resource bank includes

1) the ERIC indexes and microfiche collection, NCEC (NIE) packages, reports of products and programs of the national R&D centers, regional educational laboratories, and other out-of-state institutions and organizations;

2) descriptions of commercially developed programs and products;

3) journals and reference books to supplement those available in the area.

Cataloging and indexing of information collected by the TIS central unit is compatible with the format and language of the ERIC system to facilitate manual and possible future computer retrieval.

In the near future the TIS Central Unit hopes to add to its data bank a centralized collection of human resource information as well as to develop systematic means of collecting reports of Texas programs and products. Additions to the TIS collection of journals and reference books continue as funds permit.

Retrieval. The TIS Central Unit currently handles information retrieval functions for all search requests received. Retrieval of information from ERIC (both RIE and CIJE) is by interactive-mode computer; in-house document files are searched manually. Additional searching is done when necessary in local libraries (e.g., TEA, UT Educational Psychology Library).

Overall efficiency of the TIS searching operations has been greatly increased with the addition of on-line search capability. The TIS staff is able to conduct searches the same day they are received and to return completed searches to the appropriate information consultant the same day that off-line prints for searches arrive. These off-line printed abstracts usually arrive two days after the search is conducted. The intervening two days allow searchers to compile additional data via manual search; turn-around time averages 4.5 days compared

to the 7.2 days average while using the batch system. A cost per search analysis shows that the batch searches average $11.00 per search, while the on-line searches average $14.60 per search.

This increase in cost, TIS feels, is more than offset by the increased efficiency of staff and operations and more particularly by higher search quality. TIS searches using the on-line system are much better tailored to the user's question (because of editing capability and wider range of searchable categories) and have a much higher degree of relevance.

Materials retrieved in response to client requests from manual and computer searching may include any of the following: computer generated bibliographies of relevant ERIC documents and/or journal articles listed in CIJE with or without abstracts or annotations; xerox copies of materials from the TIS collection; loaned copies of TIS materials; bibliographies of non-ERIC materials. The response may be limited by numbers of items to be included, restrictions on inclusive publication dates to be searched, or whether sources other than ERIC are to be searched.

At present searches generally include citations and abstracts for all relevant ERIC documents and journal articles, and copies of materials retrieved from the in-house collection. These materials are carefully screened for relevance by the TIS staff member conducting the search before they are returned to the client.

Packaging. The TIS Central Unit will continue to have responsibility for packaging information both for individual searches and of prepared materials. Responses to search requests are packaged simply with a cover sheet designating the person for whom the search was conducted, a page of instructions regarding the use of the enclosed materials, and a microfiche order form (see "Other Services" below).

TIS also synthesizes information on selected topics for targeted audiences as a part of its current services to Texas educators. Syntheses of information included in these packages address the practical needs of particular user groups, e.g., teachers, administrators, teacher trainers, or parents. Needs are ascertained from a continuing study of user requests.

Information packages will continue to be distributed to the user groups they affect (as well as to individuals) through the Teacher Centers, Education Service Centers, and the Texas Education Agency depending upon the pertinence of the package topic to programs and activities of these institutions.

Information packages may consist of substantive or reference materials of practical value to the user group addressed.

Substantive information included in the packages may take any of the following forms: synthesis papers, summary papers, reprints, microfiche duplicates of documents, diagrams or drawings. Reference materials include such items as: bibliographies (with annotations), lists of program resources, lists of human resources accessible to Texas educators, lists of instructional materials and their sources. Packages developed by TIS contain a list of package contents with suggestions for their use. Each item in the package is designed as an independent unit in order to increase flexibility.

Coordination of the State Network. Activities related to the coordination of the overall state delivery network are currently in developmental stages due to the pilot nature of the project to this point. One of the major coordination activities undertaken by the TIS Central Unit and to be continued has been the training of Educational Information Consultants (EICs) functioning in local sites. Training workshops have been designed and conducted by TIS staff members. Follow-up sessions with the trained EICs are also conducted in order to support these consultants better and to obtain suggestions for modification of the delivery system itself and of the training EICs had been given.

TIS Central also has primary responsibility for project evaluation activities and has incorporated a design that will allow for continuous monitoring of user satisfaction, of TIS search quality, and of the overall systems as they function in the central unit and in each local site.

Making Texas educators aware of TIS services is a function for which TIS Central is primarily responsible. The EICs in local sites initiate and maintain contacts within those sites and contribute to awareness efforts in this way. Broad scale publicity and offering of services to persons and institutions as yet unacquainted with TIS, though, remains the responsibility of the central office in Austin.

Other Services. Additional services which are currently provided by the TIS Central Office are: (1) duplication of ERIC microfiche as follow-up to search requests; (2) maintenance of a resource collection open for on-site use by educators; (3) loan of portable microfiche readers; (4) provision of paper copy (at 10¢ per page) of ERIC documents on microfiche.

Services which might be added in the future are: (1) contracted microfilming of educational documents from the TEA, ESC, or Teacher Centers which would then be duplicated and distributed on microfiche; (2) duplication of items from microfiche collections other than ERIC, e.g., the California UNIPACs; (3) provision of reprints of journal articles cited in computer bibliographies if appropriate liaison with library cooperatives can be worked out and the legality of photocopying copyrighted material is established.

MODULE: THE TEXAS INFORMATION SERVICE
EDUCATIONAL INFORMATION CONSULTANT (TIS/EIC)

Overview

This module provides information concerning the role, responsibilities, duties, and qualifications of the Texas Information Service/Educational Information Consultant (TIS/EIC). Instructions for the questioning negotiation procedures and a check list for evaluating the Educational Information Consultant's performance of the task are included. Suggestions for effective delivery techniques of the information to the client are given. Standard Texas Information Service forms and record keeping procedures are explained. Sample copies of these forms and appropriate transparency masters for this module are included.

Objectives

This module is designed to assist in developing the Educational Information Consultant competencies listed below. A TIS/EIC should be able to:

1. Explain how the Education Information Consultant functions as a linking agent between the Texas Information Service and educational practitioners
2. Discuss the personal and professional qualifications of the TIS/EIC
3. Delineate the duties and responsibilities of the TIS/EIC
4. Conduct an effective questioning negotiation session with a client
5. Evaluate the level of Educational Information Consultant/Client interaction during questioning negotiation
6. Deliver to the client in an effective manner the requested information.
7. Use Texas Information Service record keeping forms correctly
8. Produce in schematic form the complete Texas Information Service search process.

A DELIVERY SYSTEM FOR TIS SERVICES--THE EDUCATIONAL INFORMATION CONSULTANT

by

Dr. Leo Lambert
Project Manager
Texas Information Service Project

A DELIVERY SYSTEM FOR TIS SERVICES

THE EDUCATIONAL INFORMATION CONSULTANT

To effect utilization of information, a linkage system between professional resources (TIS Central Unit) and professional users is needed. Educational Information Consultants (EICs) located in a close living and working relationship with educators in the districts they serve, are the key figures in linking TIS resources with the users.

Educational Information Consultants (EICs)

The TIS project began with an understanding of the necessity of personal contact between the educator in need of information and the system supplying information. Based on the research reports of other information service projects[1] and responses to a questionnaire concerning part-time field agent roles in other states, TIS formulated some guidelines and expectations for persons who would act as field agents. Every attempt has been made to build upon "information consultant" functions that were already being performed in educational institutions in Texas. The role of the EIC reflects the institutional context as well as the developmental requirements of TIS.

Because the EIC (or TIS field agent) is part of an institution already providing a number of services to local schools, he has been encouraged to use these services to support his information role. Specifically, the ESC, TEA, and Teacher Center consultants may be seen as a natural source of expert help in answering requests and providing technical assistance for implementation of programs and practices in the schools. Also the EIC may suggest that clients attend workshops or conferences in the home institution. In this way, the institutions may make available to their schools a new service which is mutually supportive of existing services. Hence, overlap and duplication in services or organizational roles may be avoided.

Placement of the EIC in a local ESC or Teacher Center or TEA resulted in the pilot phase in another unexpected benefit. The EICs did not have as much initial resistance to overcome in introducing the new service as was reported in other state projects: the schools have had a history of good service relationships with the EIC's "home institution." When TIS services are offered as a part of the local organization's services to schools, little hesitancy was encountered or need be expected.

---

[1] Sam D. Sieber, et al., The Use of Educational Knowledge. New York: Columbia University, Bureau of Applied Social Research, September, 1972. pp. 65-95. And D.J. Ashworth, et al., The South Carolina Pilot Program for Information Dissemination. Columbia: South Carolina Department of Education, 1971. pp. 34-59.

EIC Training

Training for EICs introduces trainees to TIS operations and processes, objectives, history, and to the services and resources that may be made available to schools and institutions participating in the system. Information consultants are trained to perform the following functions: (1) make contacts with the schools and introduce educators to TIS services; (2) negotiate client questions; (3) suggest appropriate descriptors to aid the retrieval staff in conducting the search; (4) convey information back to the client via personal interview; (5) provide access to local resources and technical assistance; (6) keep necessary records. In addition, the EICs are trained in the basic procedures used in performing manual and computer searches of the ERIC files. Special emphasis is placed on the use of the Thesaurus of ERIC Descriptors since this is one step in the retrieval process in which the EIC actually participates. Training materials used have been developed by the TIS staff drawing heavily on the Far West Laboratory's course, The Educational Information Consultant.

EIC Roles and Functions

The role of the EIC in Texas is one in which individuals work simultaneously with several educational organizations and serve to foster cooperative relationships between TIS and the consultant's home organization, between that organization and local schools, between TIS and local schools, and often among the education service organizations in a region.

Awareness. The EIC's primary function is to provide the linkage between TIS services and the educators who need them. The first step in this process is acquainting the potential user with the available services. EICs make presentations about TIS services to faculty members at full staff meetings, departmental meetings, meetings of teaching teams, and to individual teachers and administrators.

Question Negotiation. A major function of the EIC is to assist the user in problem diagnosis or question negotiation. Performance of this aspect of the role requires that the EIC have the personal ability to build intensive relationships with others and to create trust in himself. He must be able to help the client analyze, assess, and define specifically the problem or information need. He must be able to suggest possible ways in which a search topic may be expanded or narrowed and know which alteration is indicated in each specific case. To do this effectively for the variety of educational problems and issues he will encounter, the EIC must have a general knowledge of the broad scope of education. Present TIS information consultants hold positions such as Teacher Education Center Coordinator, Resource Teacher, Librarian, Media Librarian, Dissemination Specialist, and General Academic Consultant.

Delivery. After information to respond to the user's request has been retrieved, screened, packaged, and sent back to the EIC from the TIS central unit, it is the EICs function to convey this information package back to the client. In order to discuss the material with the client, the EIC must review and in some cases screen again the information package. He may also at this juncture wish to add materials that he may have available in a local collection or add a list of resource persons available in the region. The actual delivery of information and followup activities are highly variable procedures. Some EICs may find it useful to guide the user through the materials included in the package, pointing out alternatives and mentioning resource people who could help in implementation. Other information consultants may consider it impractical to convey every search personally in view of the small portion of their time available for TIS activities. In one pilot site, the consultant dealt with this problem by conveying personally all searches for first-time users of the service. Others are mailed and then followed up with a telephone call asking for reactions and offering assistance. This procedure seems satisfactory in view of the time limitations the part-time EICs face. Users also say that once they are familiar with format and how to use the materials sent by TIS, they do not feel the need for a personal visit from the EIC (See Sieber, pp. 125-127). Another alternative method of delivery is to mail the material received from TIS and follow it up with a personal visit after the client has had time to review the material. The best method for delivery seems to vary considerably with the work-load of the EIC and the client's personal preference, independence, and openness to experimentation and change.

Followup. In addition to delivering the information package produced by TIS in response to the user's request, the information consultant has a followup role. He provides access to additional information or the technical assistance the user needs to proceed toward implementation of an educational decision. Often, the performance of this function begins with the provision of copies of full documents which were cited in bibliographies. The TIS central unit supplies microfiche copies of ERIC documents to support searches conducted. Microfiche readers, when not available in the school, may be borrowed from the EIC's home organization. For copies of journal articles, the EIC contacts local libraries or his organization's collection. If the journal in question is unavailable locally, he refers the client through interlibrary loan to the University of Texas Education and Psychology Library. Most of the journal articles indexed in CIJE are available there. TIS realizes the clumsiness of this method of providing full journal articles and plans to investigate alternatives. Other documents in the TIS collection are copied for users or lent to them.

In addition to providing copies of full documents cited in the initial response package, EICs often aid the user in formulating a new search request refined from the original response or related to it.

Information consultants, also, by the nature of their roles and institutional locations have access both formally and informally to subject matter consultants and program specialists as well as a knowledge of local exemplary programs. EICs frequently put the user in contact with a consultant who can help him implement change or with a program which may provide practical suggestions to him. Knowledge of this available technical assistance makes it possible for the EIC to perform two services: (1) He may tell the client of the availability of the consultant and thus give the client another resource to call upon; and (2) He may alert the consultant to the need expressed by the client thus acting as a "needs sensor" for his own institution.

Because of the local availability of these consultants who have expertise in specific fields and have established good relationships with schools and teachers, the EIC does not act as a "change agent" to the extent of actually working with teachers in their classrooms to change practice. Rather, the EIC provides access to this kind of "technical assistance." The TIS project finds this to be a workable way to stimulate change as a result of educational information without duplicating functions that already are performed by other organizations and their personnel.

This view of the EIC's role has been dictated by the institutional context within which TIS has developed. The goal is to provide a service that will add to and build upon services already available to Texas educators. TIS maintains the belief that the extra efforts in coordination necessary to this approach are more than offset by increased efficiency and good will.

QUALIFICATIONS OF THE TIS/EIC

The Texas Information Service staff has observed in the course of the pilot testing period some important personal and professional qualifications exhibited by successful information consultants. The following list enumerates some of these qualifications:

1. The Educational Information Consultant is competent and confident as an educator, but he is not necessarily expert in a narrow field. The "generalist" viewpoint seems more appropriate than a career commitment to a particular subject matter area.

2. Although he is not necessarily an "expert," he has access to experts.

3. He has prior familarity with the individuals and/or institutions he will serve.

4. He has access to the informal communication network of the institution in which he works.

5. He is capable of developing relationships of trust and confidence and of developing a reputation as a responsive, involved individual.

6. His formality in interaction with clients depends largely upon his own personality. It is important, though, that he develop empathy and be able to communicate it.

7. He should be professionally mature to the extent that colleagues recognize him as capable in at least one role, e.g., supervisor, principal, consultant, librarian.

8. Administrative and/or knowledge utilization skills are added strengths.

DUTIES AND RESPONSIBILITIES OF THE
TEXAS INFORMATION SERVICE EDUCATIONAL INFORMATION CONSULTANT

1. Public relations in the area. (suggestions)

   a. Contact key persons and publicize service to ESC, TC, or TEA

   b. In schools--Secure support of superintendents, building principals

      --Publicize TIS service in required inservice programs in the schools

      --Participate in faculty meetings during the school year

      --Contact department chairmen and participate in departmental meetings

      --Designate a person on the staff to receive all requests for that school and transfer them to the Information Consultant

      --Talk with teachers in lounge

2. Question negotiation--Helping the user clarify his question both for himself and to assist TIS in retrieving precisely what he wants and needs. (Methods for negotiating questions will be dealt with in detail later in this training program).

3. Delivery of information--Assisting the user in interpreting and using the information returned to him in response to his request. (Methods will be outlined later in this training program).

4. Access to technical assistance. The information consultant will act as liaison between the user and the specialist (on the TC staff, ESC staff, in the college or university, or in TEA) who can help the user implement educational programs and practices which he has selected from the alternatives presented to him in his information package.

5. Analysis of needs for TIS, TC, and ESC. As a result of functioning in this role, the information consultant will be in an especially advantageous position to identify needs of educators in his region. Some of these needs may be effectively met by local ESC or TC programs; others may be information needs which TIS Central can address (perhaps through its prepackaging function) or identify for TEA or TERC as needs that can best be addressed at the state level.

6. Identification and use of local resources. The information consultant should know what information resources are available to him locally and should use these resources routinely in answering requests. In this manner, ready-reference and quick-reference requests may be handled locally, with requests for in-depth searches referred to TIS for retrieval.

QUESTION NEGOTIATION PROCEDURE

a. Establish rapport with client. To really help a client specify his problem the Information Consultant must gain client confidence by being friendly and non-threatening.

b. Describe the client (position, institution, etc.) for records

c. Ask client to describe the problem area

   1) How the information will be used--its purpose.

   2) Expand, qualify, narrow the question for search (e.g., What types of individualized programs are you interested in? Programmed instruction materials? Computer assisted?)

   3) Define ambiguous or unclear terms to the satisfaction of client and consultant.

   4) Agree on list of 5-10 key words (ERIC descriptors if possible).

   5) Establish age/grade levels, subject area, etc. (Agree on restrictions to be placed on the search.)

   6) Restate the problem to reach consensus.

d. How much information is needed? (Too much can bewilder client; not enough can leave him dissatisfied).

e. What kind of information needed? (e.g., descriptive, quantitative, literature review, program/human resources).

f. What searching has the client already done? Needless duplication can be eliminated and the client can be spared the frustration of seeing again references that he already knows about.

Small Group Activity: Question Negotiation

Notes to the Instructor

The trainees should be grouped in pairs for this exercise. One member of each pair of participants should be given a question (see examples below) and the other person should be instructed to use the Negotiating a Question checklist and the ERIC Thesaurus to fill in a User Request Form.

Example Questions

1. Joe Green, an elementary principal, expresses interest in the non-graded school plan, but he doesn't really know much about the idea. Can you help?

2. Louise Martin, a sixth grade team leader, would like her team to include some work with values in their teaching plans. The problem is that collectively or individually the team just doesn't know where or how to begin. Can you help?

3. Fred Steward, a principal, has been asked to serve on a committee to study methods and instruments for teacher evaluation. Can you help?

4. Ruth Young, a second grade teacher, expresses a wish for ideas for making her own arithmetic teaching aids so she could better individualize the arithmetic program. It seems she has some very bright students and some very slow learners in her group. Can you help?

5. Jay Harris, a school psychologist, wants to emphasize to a group of classroom teachers what effect teacher attitude has on the development of student self concept. Can you help?

Negotiating a Question*

1. Describe the client
   - Position
   - School or Institution
   - Address
   - Phone

2. Define problem area
   - What client thinks his problem is
   - What solution he is seeking
   - Assist in narrowing, expanding, and qualifying the subject (e.g., appropriate age levels)
   - Restate for client to reach agreement; consult with him about descriptors that might be appropriate

3. Define how information is to be used
   - Workshop
   - Classroom — Purpose or goal
   - Committee

4. Describe type of information desired
   - Descriptive — Review
   - Quantitative — Program/human resources

5. Describe form of delivery required or acceptable
   - Bibliography
   - Microfiche
   - Curriculum materials
   - Reports
   - Reviews, summaries
   - Abstracts
   - Reprints
   - A-V material
   - Names of authorities

   And determine size of response expected (time limits of user after he receives response)

6. Additional information
   - How much does user already know about the question?
   - What does he know about sources?
   - What has he found on his own?

7. List key words and descriptors, at least 5-10 key terms

* The User Request Form (following page) is used during questioning negotiation procedure.

TEXAS [illegible] SERVICE
USER REQUEST [illegible]

BEST COPY AVAILABLE

'S NAME: _____

TLE: _____

ESS: _____

_____

_____

_____

CRIPTION

Public School

Texas Education Agency
Div. or Dept. _____

Education Service Center
Dept. _____

Teacher Center

College / University ([ ] Staff, [ ] Student)

Other _____

ETE STATEMENT OF QUESTION:

_____

_____

_____

_____

_____

SE FOR THE INFORMATION (e.g., planning an inservice program): _____

_____

_____

_____

ICTIONS:

pan: From 19____

____ or Grade_____

t area _____

instructions _____

_____

_____

_____

_____

_____

_____

_____

Information Consultant

Name _____

Location _____

Date Rec'd _____

Date Information Required: _____

User has access to
[ ] Microfiche reader
[ ] Microfiche collection

DESCRIBE EXTENT OF USER'S SEARCH TO DATE: _____

_____

_____

_____

_____

_____

_____

_____

FOR TIS USE ONLY

SEARCH # _____

DATE REC'd _____

DATE COMPLETED _____

EVAL. FORM DATE _____

SERVICES

[ ] Bibliography, to [illegible]
[ ] TIS
[ ] Manual
[ ] Computer
[ ] Bibliography, stock
[ ] TIS paper
[ ] Journal reprint
[ ] Consultant reference
[ ] Program reference
[ ] Microfiche loan
[ ] Microfiche copy
[ ] Document loan
[ ] Publications list
[ ] Other _____

_____

_____

_____

_____

_____

SUGGESTED DESCRIPTORS

After the Educational Information Consultant has conducted questioning negotiation procedures, the following checklist of items may be helpful in determining the level of Educational Information Consultant/Client interaction during the negotiation. (This checklist might also be used after a simulated question negotiation situation during an Educational Information Consultant training session.)

Observer Checklist

For each of the following items, circle the letter that most nearly corresponds with your observation concerning the interaction between EIC and Client. Be sure to answer each item.

1. Did the EIC help the Client state what his problem was?

   a. No, not at all
   b. Yes, helped somewhat
   c. Yes, helped considerably
   d. Yes, actively helped
   e. Cannot say

2. Did the EIC help the Client clarify what he needed?

   a. No, didn't help at all
   b. Yes, vaguely
   c. Yes, somewhat
   d. Yes, a great deal
   e. Cannot say

3. Did the EIC listen to the Client's problem?

   a. Didn't pay attention
   b. Listened, but seemed to be easily distracted
   c. Paid close attention
   d. Don't know

4. Did the EIC communicate to the Client that he understood the problem?

   a. Communicated this very well
   b. Mostly communicated this
   c. Partially communicate this
   d. Didn't communicate this at all
   e. Don't know

5. To what extent did the questions asked by the EIC actually help the Client to clarify his problems?

   a. Didn't help at all
   b. Helped somewhat
   c. Was extremely helpful
   d. Couldn't tell

6. Did the EIC ask questions which indicated that he had a clear grasp of what the Client had said?

   a. Rarely
   b. Occasionally
   c. Frequently
   d. Regularly
   e. Can't say

7. Did the EIC make any effort to find out about the Client's personal motivation, feelings, or attitudes toward the problem?

   a. No effort
   b. Little effort
   c. Some effort
   d. A great deal of effort
   e. Cannot say

8. Did the EIC indicate through his general demeanor, posture, or gestures (such as nodding his head, murmuring "uh-huh," smiling, etc.) that he was encouraging the Client to continue to elaborate and discuss the problem?

   a. Not at all
   b. Intermittently
   c. Frequently
   d. Very frequently
   e. Cannot say

9. Did the EIC ask the Client repetitive questions?

   a. Very frequently
   b. Frequently
   c. Occasionally
   d. Rarely
   e. Don't know

(over)
FWLERD 1/72

10. During the interview, did the EIC restate or paraphrase the Client's problem correctly?

    a. Completely correct
    b. Mostly correct
    c. Partially correct
    d. Not at all
    e. Don't remember

11. Did the EIC ask whether the Client was familiar or had any previous experience with this type of problem?

    a. Yes
    b. Hinted
    c. No
    d. Don't remember

12. Did the EIC ask the Client what assistance he expected to get from the EIC?

    a. Yes
    b. No
    c. Don't remember

13. Did the Client and the EIC agree on the course of action to be taken (that is, agree on what information was needed and when) before terminating their interview?

    a. Yes
    b. Partially
    c. No
    d. Don't remember

    If "Partially" or "No," explain why:

14. Did the Client agree that the search terms suggested by the EIC were descriptive of the problem they had discussed?

    a. No, none were descriptive
    b. Yes, agreed some were
    c. Yes, agreed most were
    d. Yes, agreed all were
    e. Don't remember

The following questions concern the Client's reactions to questions asked by the EIC. Circle the letter that most nearly corresponds with your opinion of the interaction between EIC and Client.

15. How did the Client react to the EIC's questions?

    a. Unresponsive
    b. Slightly responsive
    c. Responsive
    d. Extremely responsive
    e. Don't remember

16. How well did the Client appear to understand the EIC's questions?

    a. Clearly
    b. With some understanding
    c. Vaguely
    d. Not at all
    e. Cannot say

17. How did the Client appear at the conclusion of the interview.

    a. Lost
    b. Not fully satisfied
    c. Satisfied
    d. Don't remember

Comments: (Use other side, if necessary.)

DELIVERY OF INFORMATION TO THE CLIENT

a. Review briefly the client's request

b. Describe contents of the package being delivered

c. Discuss limitations of the package

d. Review recommendations and conclusions

e. Seek client's reaction

It is suggested that you read carefully the following article, "Guidelines for Conveying Information to Client."

GUIDELINES FOR CONVEYING INFORMATION TO CLIENT

Communication is the written or verbal process of conveying retrieved and transformed information back to the client. As such, it is an integral process in the successful performance of the EIC role. Through communication, the EIC clarifies the results of the search and explains the contents of the information package, its organization and limitations, to the client.

Client satisfaction may depend on a systematic communication of the information package. Critical elements of a verbal or written communication include:

1. Statement of the Client's Problem. Restate or paraphrase the problem to indicate your understanding of it. If appropriate, refer to the "contract" made with the client, particularly in terms of the type of information needed, the time required, and the purpose for requesting assistance.

2. Description of the Contents of the Information Package. List or review the materials and/or types of information you included in the package. Explain how the information is organized--that is, by topic or problem-related area, by type of program, etc. Indicate also the amount and kind of information included--that is, abstracted material; bibliography, topical or annotated; a literature review; a state-of-the-art summary; sample curriculum or audiovisual materials; copies of original documents; etc. [Note: It is seldom appropriate to organize a package so that all bibliographies or abstracts are grouped together. Such an organization crosses program or topic lines indiscriminately and may tend to confuse the client.]

3. Limitations of the Package. How conclusive or definitive is the information included in the package? Indicate whether more information pertinent to the problem is forthcoming or should be obtained. In addition, made a general statement about what you wanted to include but couldn't. Explain why--i.e., that information could not be located; that materials had been ordered, but not received; that costs were prohibitive; or that your access to appropriate resources was limited or not possible. Note whether such information is important enough that the client should wait for you to locate it or try to find it himself. If so, explain how, where, and when it can be obtained.

   If appropriate, note the amount or kind of information excluded from the package and why--for example, it was irrelevant, costly, not applicable or untimely. Note also whether any difficulty you encountered in finding on-target, relevant information imposes limitations on the package.

FWLERD 1/72

You also have the option of stating your level of competence in selecting, making judgments about relevance, and transforming information. An EIC's competence is acquired over time. It increases with repeated exposure to the educational information field. Knowledge of the EIC's level of expertise and his experience in dealing with different kinds of information offers clues as to the uniqueness of the package and gives the client the option of making an independent judgment about the quality of information in the package.

4. Recommendations and Conclusions. Even if a series of recommendations has been included in 2 and 3 above, it is helpful to review and summarize for the client alternatives for using the package of information. Here is where you can share your expertise with the client and indicate how the client can effectively use the information in the package to make the final decisions himself. You may suggest alternate ways in which the information package might be approached for potential problem solution. For example, you might indicate that, "From past experience, we have found that, in attacking an administrative problem such as this, it is best to define an operational base from one particular source, such as the article I have before me now, and tie in the other sources I have provided as they help to identify the appropriate problem solution(s)." "You might come up with a consolidated position paper if you use the best ideas from each of these sources." Such an approach will give the client a better feeling for the material presented in relation to his particular problem. Input to the client should also include different ways to review and evaluate information in the package, based on the number of people involved in the review and the amount of time available to the reviewer(s). You may suggest a particular order for examining different items or indicate which items are solution-oriented, as opposed to background or supplemental, information on the problem. For example, "the abstracts of these research reports present current theory on inquiry learning and teaching techniques. They might give you some helpful background on the instructional techniques used in several of the curriculum programs which I've also reported in your package."

5. Client Reaction. Remember to seek the client's reaction to the package and to your presentation and description of it. Client reaction is an important indicator of the worth of your service. Does the client feel that his problem or question was answered? Was the service time-saving? Was the package satisfactory, comprehensive enough, understandable, clear, etc.? Would the client recommend your service to others? It may be helpful to incorporate in your package or presentation a formal or informal evaluation form for recording the client's response to these and similar questions.

FORMS USED BY THE TIS/EIC

a. *Question negotiation form.* To record search requests and pertinent data about person requesting, restrictions on the request, and how the request was answered.

b. *Evaluation form.* To assess the value to the user of services provided in responding to his request. (Sent by TIS Central)

c. *Request record log.* To provide a record of requests received, those in process, and those completed. This gives the Information Consultant a quick method of determining "where he is" at any time. It also serves as a monthly report to TIS Central on requests received and handled.

EIC REQUEST RECORD LOG

Instructions:

Search # (from TIS)	- This column should be filled in after the printout and the xeroxed search form is returned to the EIC from TIS. The search number assigned at the central office is indicated in the upper left hand corner of the User Request Form. Since the EIC keeps a copy of the User Request Form in case of postal service errors, it is recommended that the search number be added to that copy and given to the client. The xeroxed request form returned from TIS should then replace that form in the EIC's files. The client can benefit by seeing his orignial question in relation to the printouts. The EIC can refer to the xeroxed form to note descriptors used by retrieval staff and to add follow-up activities.
Client's Name/ Address	- This column is self-explanatory.
Topic	- This column needs only a brief phrase to indicate the search question. This helps avoid mix-up when one client makes a number of requests at one time.
Date Rec'd From Client	- This column should reflect the date the EIC recieved a request.
Date Delivered To Client	- This column should indicate the date the EIC delivered the retrieved material to the client. The "delivered to client" date could be indicated in a corner of the xeroxed User Request Form, returned by TIS. This form would then contain all the information needed to complete the first five columns of the EIC Request Record Log.
Other Resources Used by EIC	- If the EIC refers the client at the time of the initial request to resources other than TIS such as the public library or local consultants, it should be noted in this column.
Follow-Up Actions	- After the retrieved material has been delivered, if the client requests further resources for using the information, it should be noted in this column. The difference between these last two columns is mainly the time at which other resources or help are offered. The first column covers the time before retrieved material is delivered from TIS and the second column indicates additional help after the client has perused the material sent by TIS.

The request log covers one month's searches and should be sent to TIS central no later than the 10th of the following month. This should allow sufficient time for the requests made during that month to be delivered to the client. However, if a search made at the end of the month cannot be delivered by the 10th of the following month, the EIC should include that search on the following month's report. If this occurs, please insure that the information does get placed at the beginning of the following month's report, in order for TIS to maintain complete information on each search. Finally, when appropriate, please complete the last column to indicate any additional actions taken by the EIC to help a particular client.

py to [illegible] by 10th
month following report period.

EIC name _____

location _____

_____

_____

EIC's REQUEST RECORD LOG
for month of _____, 19__

arch # rom TIS)	Client's Name/Address Phone	Topic	Date Rec'd from Client	Date Dcl'd to Client	Other Resources Used by EIC	Follow up Actions Taken by EIC

TEXAS INFORMATION SERVICE
USER REQUEST FORM

BEST COPY AVAILABLE

R'S NAME: _____

ITLE: _____

RESS: _____

_____

_____

t _____

T'S AFFILIATION

] Public Schools

] Texas Education Agency
Div. or Dept. _____

Education Service Center
Dept. _____

Teacher Center

College / University ([ ] Staff, [ ] Student)

Other _____

LETE STATEMENT OF QUESTION:

_____

_____

_____

_____

_____

_____

OSE FOR THE INFORMATION (e.g., planning an inservice program): _____

_____

_____

_____

RICTIONS:

span: From 19____

____ or Grade____

ct area _____

instructions _____

_____

_____

_____

_____

_____

_____

Information Consultant

Name _____

Location _____

Date Rec'd _____

Date Information Required:

_____

User has access to:

[ ] Microfiche reader

[ ] Microfiche collection

DESCRIBE EXTENT OF USER'S SEARCH TO DATE: _____

_____

_____

_____

_____

_____

_____

_____

FOR TIS USE ONLY

SEARCH # _____

DATE REC'd _____

DATE COMPLETED _____

EVAL. FORM DATE _____

SERVICES

[ ] Bibliography, to order

[ ] TIS

[ ] Manual

[ ] Computer

[ ] Bibliography, stock

[ ] TIS paper

[ ] Journal reprint

[ ] Consultant reference

[ ] Program reference

[ ] Microfiche loan

[ ] Microfiche copy

[ ] Document loan

[ ] Publications list

[ ] Other _____

_____

_____

_____

_____

_____

SUGGESTED DESCRIPTORS

USER'S EVALUATION OF
TIS SERVICES

Texas Information Service (TIS)
6504 Tracor Lane
Austin, Texas 78721
512/926-8080, Ext. 47

Search No._____

Name:

Position:

School or Institution:

Search Topic:

In order to help us improve our service of providing useful information to Texas educators, we will appreciate your completing this questionnaire to evaluate the recent information search conducted for you by TIS. If you have further comments, criticisms, or suggestions, we welcome them. *Please return in the enclosed self-addressed envelope at your earliest convenience.* Thank you for your cooperation.

Directions: Check only one alternative for each question.	Above Average	Average	Small	Not At All
1. To what extent did you find it easy to make a request on a specific topic?	[ ]	[ ]	[ ]	[ ]
2. To what extent did you find the information consultant helpful in negotiating your request?	[ ]	[ ]	[ ]	[ ]
3. To what extent was your topic adequately covered by the TIS information package?	[ ]	[ ]	[ ]	[ ]
4. To what extent did the information sent by TIS increase your understanding of the requested topic?	[ ]	[ ]	[ ]	[ ]
5. To what extent do you consider the information searching service of TIS to be useful for your professional functioning?	[ ]	[ ]	[ ]	[ ]
6. To what extent did the information sent by TIS meet your expectations of the service?	[ ]	[ ]	[ ]	[ ]

7a. Would you prefer receiving initial information on your subject in the form of:

- [ ] A listing of publications and activities, with provision for ordering the publications of your choice from TIS in microfiche or paper copy.
- [ ] Abstracts
- [ ] Xerox copies of materials from resources other than ERIC or CIJE.

7b. If TIS services were expanded, would you prefer receiving information in a form not indicated above. If so, in what form?

- [ ] the publication itself
- [ ] a review of the literature
- [ ] an analysis of the subject
- [ ] other (specify)

7c. Were the materials provided in your package

- [ ] too many
- [ ] adequate
- [ ] too few

8. The information package sent to you arrived:
   [ ] Earlier than expected
   [ ] In time for your purposes
   [ ] Late but still useful
   [ ] Too late for your purposes

9. If exemplary programs or resource people were suggested to you, did you contact them?
   [ ] No
   [ ] Yes (Please identify below)

Name	Program
1. _____	_____
2. _____	_____

10. To determine for what purpose you requested information and also in what way you actually used the information received, please indicate in the first column your intended purpose and in the second, your actual use.

Intended purpose	Actual Use
[ ]	[ ] making a decision on an educational issue
[ ]	[ ] planning a new program
[ ]	[ ] revising an existing program
[ ]	[ ] increasing professional knowledge
[ ]	[ ] reviewing literature
[ ]	[ ] writing a proposal or report
[ ]	[ ] using in a classroom
[ ]	[ ] other (please specify)_____

11. How will other people use the information sent? (Check appropriate boxes)
   [ ] routinely circulated in dept. or school
   [ ] reproduced for wider distribution
   [ ] presented to committee or task force

   Numbers of people
   [ ] 1-5
   [ ] over 5
   [ ] none

12a. If the information sent affected or changed classroom practice or learning conditions, how many students were involved: [ ] 1-30 pupils [ ] 30-100 pupils [ ] 100-500 pupils
   [ ] all pupils in school campus
   [ ] all pupils in school district

12b. If the information received affected areas other than classroom, please indicate below.
   [ ] Teacher inservice training
   [ ] Administration on a school campus
   [ ] Administration in a school district
   [ ] State-wide planning
   [ ] Other (specify) _____

13. Please summarize your impression of the usefulness or value of the information received.
   [ ] Provided new ideas
   [ ] Provided additional alternatives for decision making
   [ ] Increased awareness of other problems to be encountered
   [ ] Increased awareness of scope of materials available
   [ ] Reinforced present thinking
   [ ] Other
   [ ] None, was of no assistance

14. What comments, criticisms, or suggestions can you offer about the information search and/or TIS service?

_____

_____

_____

TIS/EIC RECORD KEEPING PROCESSES

a. Request record log *

   1) Record all followup actions, e.g., workshops you told user of, specialist you put him in contact with, additional materials you helped him acquire.

   2) Send copy of log to TIS monthly. This will constitute your monthly report of requests and activities in connection with them.

b. Question negotiation form *

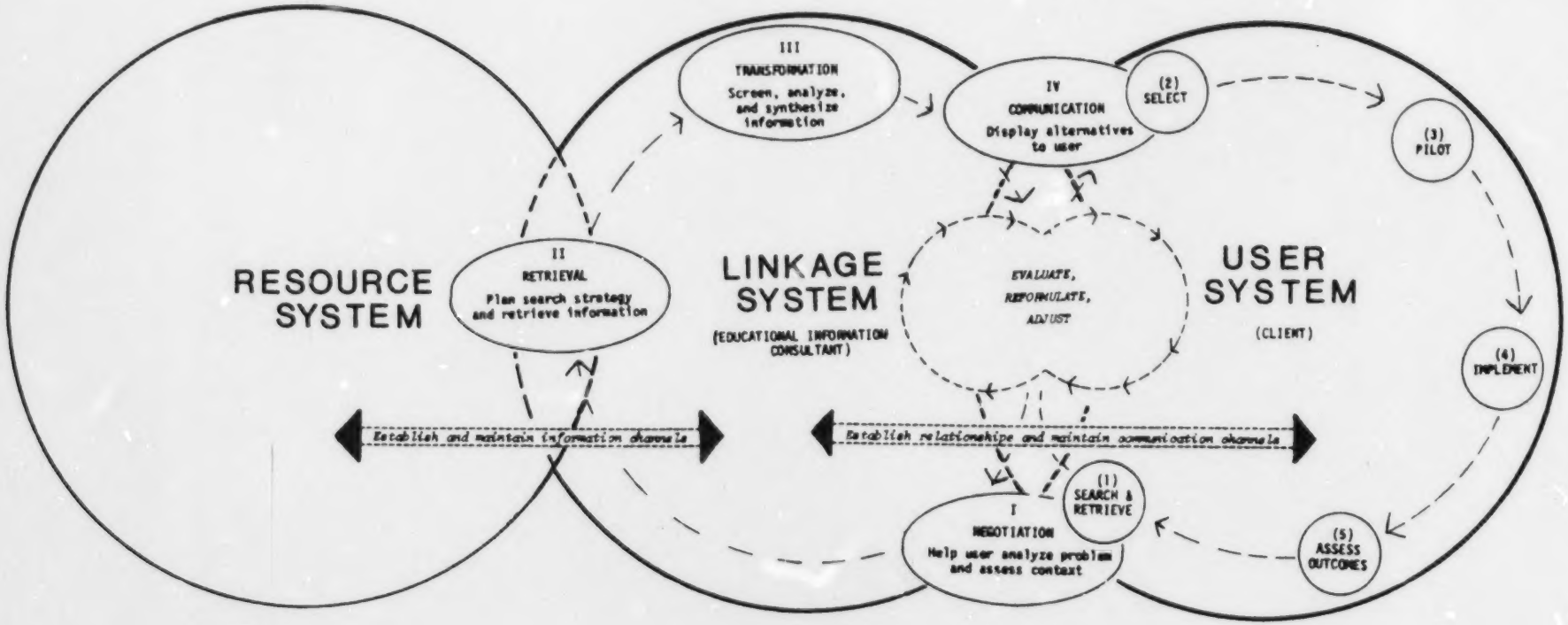
   1) One copy to TIS. (To initiate TIS retrieval of appropriate information).

   2) One file copy for information consultant. (To help him maintain records to supplement your request record log).

* Copies of each of the forms precede this page.

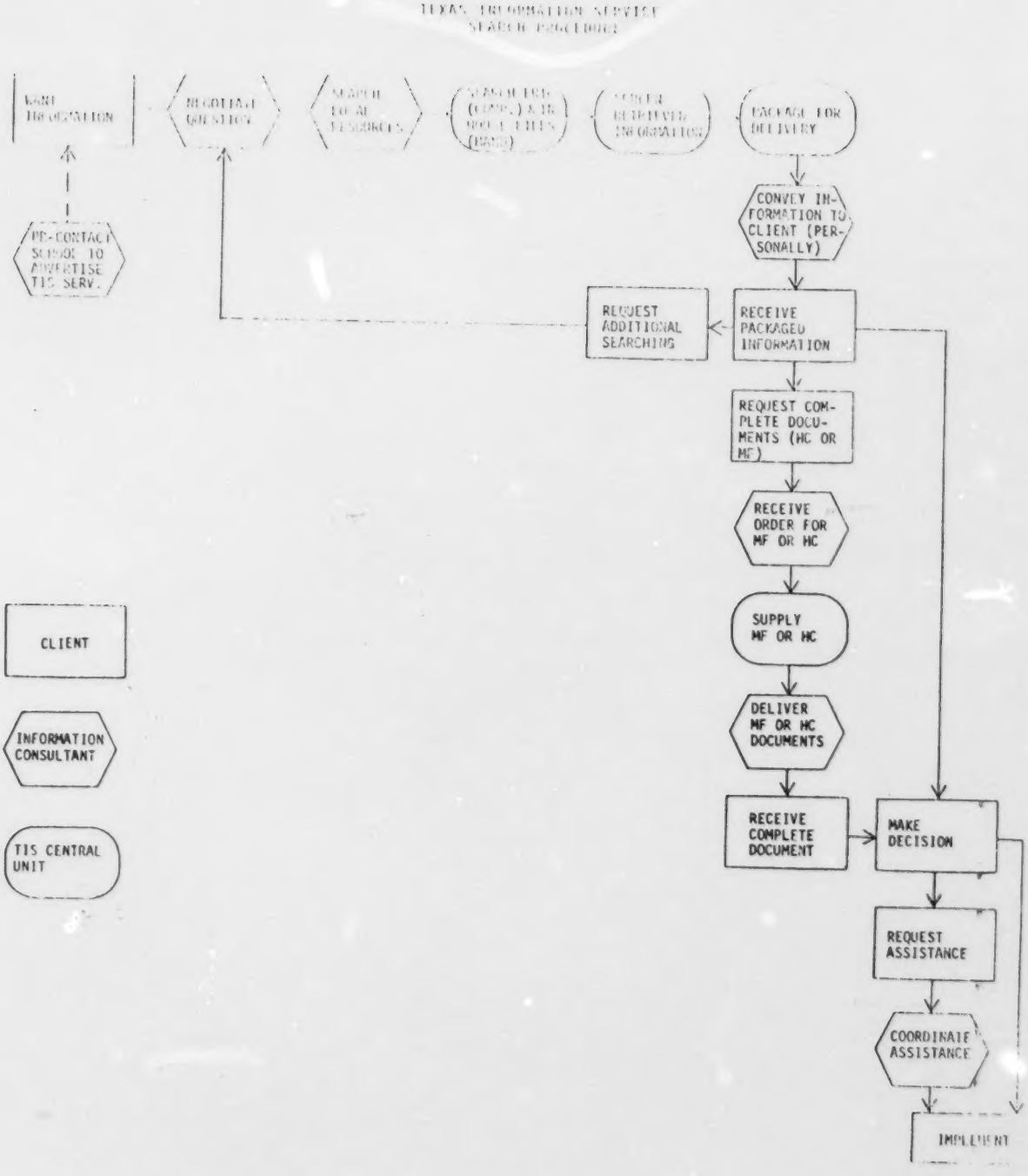
REQUEST RECORD LOG CONSTITUTES MONTHLY REPORT TO TIS.

A PROCESS MODEL OF THE
EDUCATIONAL INFORMATION CONSULTANT ROLE



Far West Laboratory for Educational
Research and Development 3/71

BEST COPY AVAILABLE



ROLE OF THE INFORMATION CONSULTANT

1. PUBLIC RELATIONS
2. QUESTION NEGOTIATION
3. DELIVERY OF INFORMATION
4. ACCESS TO TECHNICAL ASSISTANCE
5. ANALYSIS OF NEEDS FOR TIS, TC, AND ESC
6. IDENTIFICATION AND USE OF LOCAL RESOURCES

MODULE: THE ERIC SYSTEM

Overview

The Educational Resources Information Center (ERIC) is the major resource used by TIS in retrieving information to respond to client requests. The purpose of this module is to present the organization and function of the ERIC system in order to aid the Texas Information Service/Educational Information Consultant (TIS/EIC) in his roles of question negotiation, translation of questions into ERIC terms, and delivery of information. A secondary purpose for the module is to familiarize the TIS/EIC with computer retrieval processes in order that he may better understand how he functions in the overall information searching process.

This module provides background readings and suggested activities for understanding the ERIC system, the ERIC Thesaurus, the principle of coordinate indexing, Boolean logic as it applies to ERIC computer searching, and the "Main Ideas System" for organizing search terms.

Objectives

This module is designed to assist in developing the Educational Information Consultant competencies listed below. A TIS/EIC should be able to:

1. Explain the organization of the ERIC system, its process for the input of documents, and methods for locating specific documents in its index publications
2. Use the ERIC Thesaurus to locate appropriate descriptors for negotiated user requests
3. Organize ERIC descriptors into concept groups, using the "Main Ideas System "
4. Explain the principle of coordinate indexing and its relationship to computer retrieval of ERIC documents
5. Explain the Boolean logic operators, AND, OR, and AND NOT as they apply to computer searching of ERIC
6. Define and explain the significance of the retrieval process to the successful operation of a responsive information service.

INTRODUCING THE ERIC SYSTEM

Notes to the Instructor

Included in this manual are two sets of materials which may be useful in giving trainees an overview of the ERIC system. Immediately following is a set of information sheets published by the National Institute of Education on various aspects of the ERIC system. A set of transparency masters from the ERIC Clearinghouse on Teacher Education with an instruction sheet concerning organization and suggested uses is also included. In addition, the Academic Services Department, Educational Service Center, Region 10, 400 E. Spring Valley Road, Richardson, Texas has created a slide/tape presentation which is available on loan to other Education Service Centers and is useful for overview of the ERIC system. An ERIC slide/tape presentation is available for purchase from the ERIC Clearinghouse on Teacher Education, One Dupont Circle, Suite 616, Washington, D.C. 20036.

ERIC EDUCATIONAL RESOURCES INFORMATION CENTER*

ERIC stands for Educational Resources Information Center. ERIC was originally conceived in the U. S. Office of Education in the mid-1960's as a system for providing ready access to educational literature. At the time ERIC was first discussed, the literature of education was uncontrolled. Research reports, submitted to OE by their contractors and grantees, received an initial scattered distribution and then disappeared. Reports from other sources generally remained equally inaccessible. ERIC was intended to correct this chaotic situation and to provide a foundation for subsequent information analysis activities and attempts to spread the use of current developments.

Because of the decentralized nature of American education, education's many specializations, and the existence of numerous professional organizations, ERIC's designers opted for a network of organizations rather than a single monolithic information center located in Washington. ERIC was conceived, therefore, as a network of "clearinghouses," located across the country in "host" organizations that were already naturally strong in the field of education in which they would operate.

Contracts with clearinghouses originally gave them responsibility for acquiring and selecting all documents in their area and for "processing" these documents. "Processing" includes the familiar surrogation activities of cataloging, indexing, and abstracting. This scheme has worked out very well. Virtually all observers of ERIC have concluded over time that the network of clearinghouses does a better job of ferreting out the current literature of education than one single information center in Washington could ever do. With their specialized subject expertise, clearinghouse staff are well qualified to manage ERIC document selection functions. Decentralization has paid off as well for information analysis and user service activities. However, decentralization was not the complete answer. In order to generate products that included the output of all network components, information gathered by the clearinghouses had to be assembled at one central place. ERIC's final design, therefore, included decentralized clearinghouse operations integrated around a central computerized facility which serves as a switching center for the network. The data recorded by each of the clearinghouses is sent to the facility to form a central data base from which publications and indexes are produced.

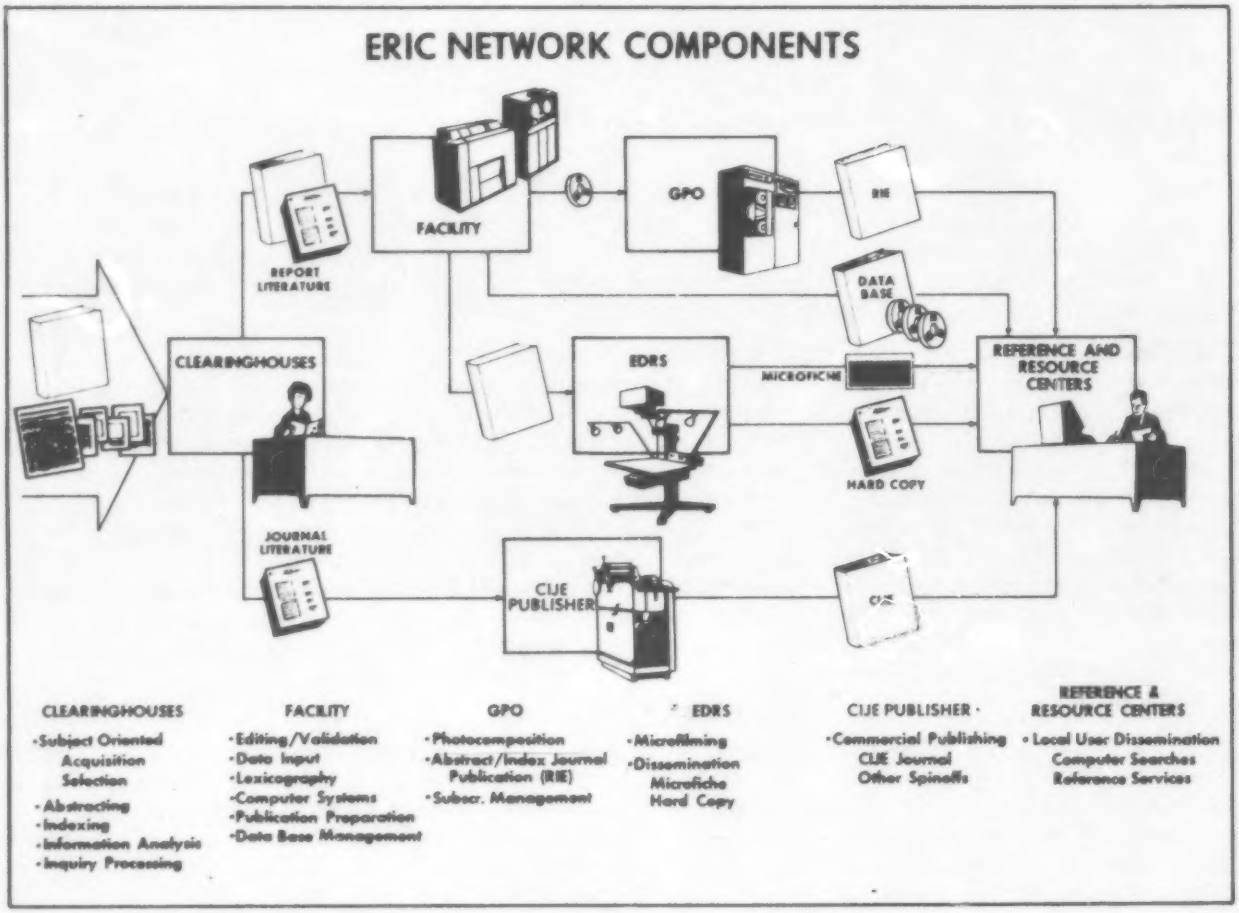
Similar arrangements are used to supply the public with copies of reports added to the system. A basic decision for ERIC was to make documents available from a central source instead of just informing users that a given document existed. It was, therefore, necessary to provide a document reproduction service where any non-copyrighted document announced could be obtained. (When permission is obtained, copyrighted materials are also reproduced.) In other words, ERIC was developed as a complete document announcement and retrieval service.

Both of these centralized services had entrepreneurial aspects. The Government obviously could not afford to subsidize every user's document needs. The document reproduction effort had to become self-supporting or it would become too expensive within Federal budgets. Therefore, users had to pay for reports they wanted. In the same way, dissemination of the data base is not subsidized by the taxpayer; persons wanting ERIC magnetic tapes are required to meet order processing, tape, and duplication costs. The Federal Government limits its investment in both areas by generating a fundamental data base and then permitting the private sector to market it at prices as advantageous to the public as possible.

In support of this strategy, and also because central facility operations depended on use of advanced technologies (computerized photocomposition and microreprographic technology), these functions were located in the commercial sector.

*Now located within:
**National Institute of Education (NIE)
Washington, D. C. 20202**

ERIC, therefore, emerges as a network with four levels. The first or Governmental level is represented by NIE and Central ERIC (the funder, policy setter, and monitor). The second or non-profit level is made up of 18 Clearinghouses located at universities or professional societies. The third or commercial level consists of the centralized facilities for managing the data base, putting out published products, making microfiche, and reproducing documents. Fourth and last are the users who receive the benefit of these activities.



ERIC CLEARINGHOUSES

The ERIC Clearinghouses have responsibility within the network for acquiring the significant educational literature within their particular areas, selecting the highest quality and most relevant material, processing (i.e., cataloging, indexing, abstracting) the selected items for input to the data base, and also for providing information analysis products and various user services based on the data base.

The exact number of Clearinghouses has fluctuated over time in response to the shifting needs of the educational community. There are currently 16 Clearinghouses. These are listed below, together with full addresses, telephone numbers, and brief scope notes describing the areas they cover.

ERIC Clearinghouse in *Career Education*
Northern Illinois University
College of Education
204 Gurler School
DeKalb, Illinois 60115
Telephone: (815) 753-1251 or 1252

Career education, formal and informal at all levels, encompassing attitudes, self-knowledge, decision-making skills, general and occupational knowledge, and specific vocational and occupational skills; adult and continuing education, formal and informal, relating to occupational, family, leisure, citizen, organizational, and retirement roles; vocational and technical education, including new sub-professional fields, industrial arts, and vocational rehabilitation for the handicapped.

ERIC Clearinghouse on *Counseling and Personnel Services*
University of Michigan
School of Education Building, Room 2108
East University & South University Streets
Ann Arbor, Michigan 48104
Telephone: (313) 764-9492

Preparation, practice, and supervision of counselors at all educational levels and in all settings; theoretical development of counseling and guidance; use and results of personnel procedures such as testing, interviewing, disseminating, and analyzing such information; group work and case work; nature of pupil, student, and adult characteristics; personnel workers and their relation to career planning, family consultations, and student orientation activities.

ERIC Clearinghouse on the *Disadvantaged*
Columbia University, Teachers College
Information Retrieval Center on the Disadvantaged
Box 40
525 W. 120th Street
New York, New York 10027
Telephone: (212) 678-3438

Effects of disadvantaged experiences and environments, from birth onward; academic, intellectual, and social performance of disadvantaged children and youth from grade 3 through college entrance; programs and practices which provide learning experiences designed to compensate for special problems of disadvantaged; issues, programs, and practices related to economic and ethnic discrimination, segregation, desegregation, and integration in education; issues, programs, and materials related to redressing the curriculum imbalance in the treatment of ethnic minority groups.

ERIC Clearinghouse on *Early Childhood Education*
University of Illinois
College of Education
805 W. Pennsylvania Avenue
Urbana, Illinois 61801
Telephone: (217) 333-1386

Prenatal factors, parental behavior; the physical, psychological, social, educational, and cultural development of children from birth through the primary grades; educational theory, research, and practice related to the development of young children.

ERIC Clearinghouse on *Educational Management*
University of Oregon
Eugene, Oregon 97403
Telephone: (503) 686-5043

Leadership, management, and structure of public and private educational organizations; practice and theory of administration; preservice and inservice preparation of administrators, tasks, and processes of administration; methods and varieties of organization, organizational change, and social context of the organization.

Sites, buildings, and equipment for education; planning, financing, constructing, renovating, equipping, maintaining, operating, insuring, utilizing, and evaluating educational facilities.

ERIC Clearinghouse on *Handicapped and Gifted Children*
The Council for Exceptional Children
1920 Association Drive
Reston, Va. 22091
Telephone: (703) 620-3660

Aurally handicapped, visually handicapped, mentally handicapped, physically handicapped, emotionally disturbed, speech handicapped, learning disabilities, and the gifted; behavioral, psychomotor, and communication disorders, administration of special education services; preparation and continuing education of professional and paraprofessional personnel; preschool learning and development of the exceptional; general studies on creativity.

ERIC Clearinghouse on *Higher Education*
The George Washington University
One Dupont Circle, Suite 630
Washington, D. C. 20036
Telephone: (202) 296-2597

Various subjects relating to college and university students, college and university conditions and problems, college and university programs. Curricular and instructional problems and programs, faculty, institutional research, Federal programs, professional education (medical, law, etc.), graduate education, university extension programs, teaching-learning, planning, governance, finance, evaluation, interinstitutional arrangements, and management of higher educational institutions.

ERIC Clearinghouse on *Information Resources*
Stanford University
School of Education
Center for Research and Development in Teaching
Stanford, California 94305
Telephone: (415) 321-2300 X3345

Management, operation, and use of libraries; the technology to improve their operation and the education, training, and professional activities of librarians and information specialists. Educational techniques involved in microteaching, systems analysis, and programmed instruction employing audiovisual teaching aids and technology, such as television, radio, computers, and films. Technology in society adaptable to education, including cable television, communication satellites, microforms, and public television.

ERIC Clearinghouse for *Junior Colleges*
University of California
Powell Library, Room 96
405 Hilgard Avenue
Los Angeles, California 90024
Telephone: (213) 825-3931

Development, administration, and evaluation of public and private community junior colleges. Junior college students, staff, curricula, programs, libraries, and community services.

ERIC Clearinghouse on *Languages and Linguistics*
Modern Language Association of America
62 Fifth Avenue
New York, New York 10011
Telephone: (212) 741-7863

Languages and linguistics. Instructional methodology, psychology of language learning, cultural and intercultural content, application of linguistics, curricular problems and developments, teacher training and qualifications, language sciences, psycho-linguistics, theoretical and applied linguistics, language pedagogy, bilingualism, and commonly and uncommonly taught languages including English for speakers of other languages.

ERIC Clearinghouse for *Reading and Communication Skills*
National Council of Teachers of English
1111 Kenyon Road
Urbana, Illinois 61801
Telephone: (217) 328-3870

Reading, English, and communication skills, preschool through college. Educational research and development in reading, writing, speaking, and listening. Identification, diagnosis, and remediation of reading problems. Speech communication—forensics, mass communication, interpersonal and small group interaction, interpretation, rhetorical and communication theory, instruction development, speech sciences, and theater. Preparation of instructional staff and related personnel in these areas.

All aspects of reading behavior with emphasis on physiology, psychology, sociology, and teaching. Instructional materials, curricula, tests and measurement, preparation of reading teachers and specialists, and methodology at all levels. Role of libraries and other agencies in fostering and guiding reading. Diagnostic and remedial services in school and clinical settings.

ERIC Clearinghouse on *Rural Education and Small Schools*
New Mexico State University
Box 3AP
Las Cruces, New Mexico 88003
Telephone: (505) 646-2623

Education of Indian Americans, Mexican Americans, Spanish Americans, and migratory farm workers and their children; outdoor education; economic, cultural, social, or other factors related to educational programs in rural areas and small schools; disadvantaged of rural and small school populations.

ERIC Clearinghouse on *Science, Mathematics, and Environmental Education*
The Ohio State University
1800 Cannon Drive
400 Lincoln Tower
Columbus, Ohio 43210
Telephone: (614) 422-6717

All levels of science, mathematics, and environmental education; development of curriculum and instructional materials; media applications; impact of interest, intelligence, values, and concept development upon learning; preservice and inservice teacher education and supervision.

ERIC Clearinghouse for *Social Studies/Social Science Education*
855 Broadway
Boulder, Colorado 80302
Telephone: (303) 443-1383 ext. 8434

All levels of social studies and social science; all activities relating to teachers; content of disciplines; applications of learning theory, curriculum theory, child development theory, and instructional theory; research and development programs; special needs of student groups; education as a social science; social studies/social science and the community.

ERIC Clearinghouse on *Teacher Education*
American Association of Colleges for Teacher Education
One Dupont Circle, Suite 616
Washington, D.C. 20036
Telephone: (202) 293-7280

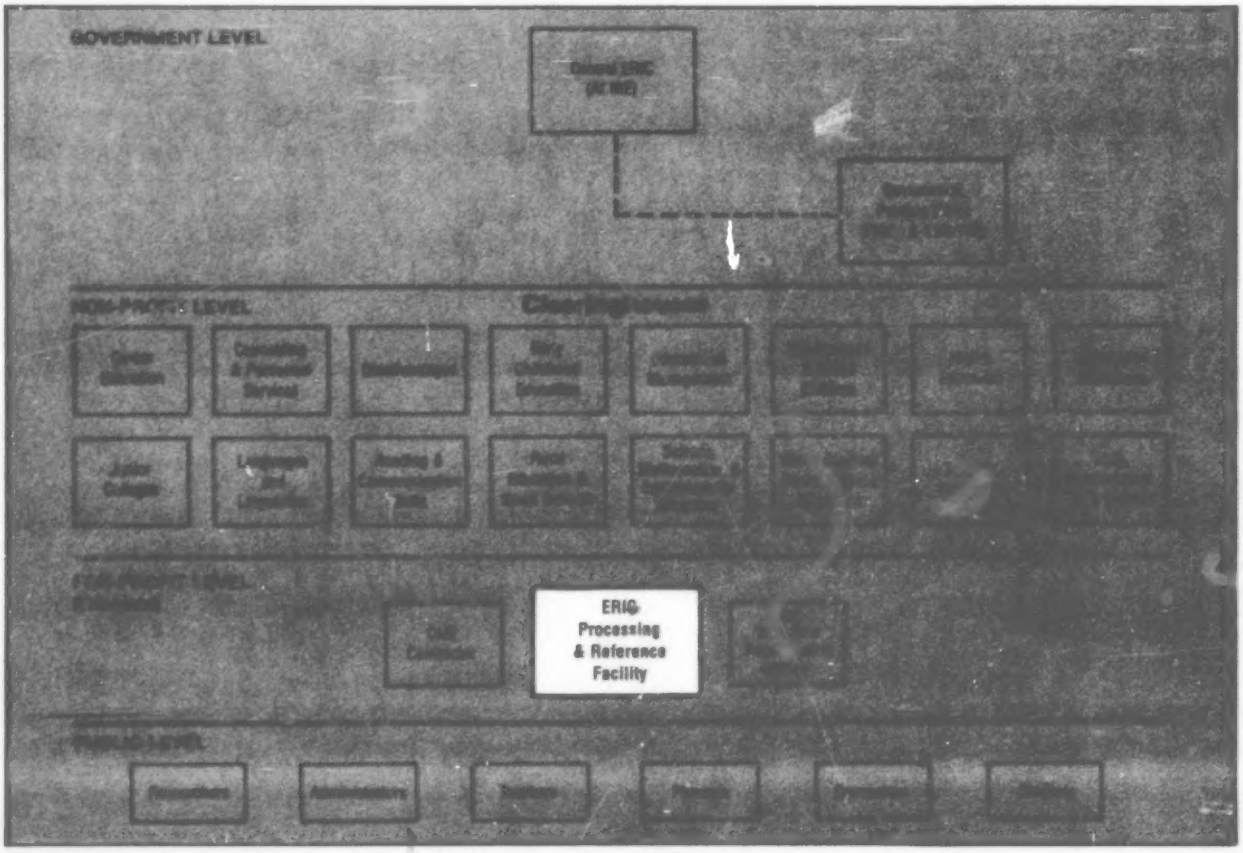
School personnel at all levels; all issues from selection through preservice and inservice preparation and training to retirement; curricula; educational theory and philosophy; general education not specifically covered by Educational Management Clearinghouse; Title XI NDEA Institutes not covered by subject specialty in other ERIC Clearinghouses; all aspects of physical education.

ERIC Clearinghouse on *Tests, Measurement, and Evaluation*
Educational Testing Service
Princeton, New Jersey 08540
Telephone: (609) 921-9000 ext. 2691

Tests and other measurement devices; evaluation procedures and techniques; application of tests, measurement, or evaluation in educational projects or programs.

ERIC PROCESSING AND REFERENCE FACILITY

The ERIC Processing and Reference Facility is a centralized information processing facility serving all components of the ERIC network, i.e., Central ERIC, sixteen (16) decentralized Clearinghouses, ERIC Document Reproduction Service, *CIJE* Contractor. It is under the policy direction of Central ERIC. Services provided include: receiving and dispatch, document control (screening, duplicate checking, assignment, storage, special distributions, accessioning), document analysis (cataloging, indexing, abstracting, editorial review), authority list maintenance (including lexicographic analysis), data preparation (preparing machine-readable data), computer processing, system and file maintenance, data base management, programming, reference responses, etc. The Facility prepares and delivers a variety of products and publications from the ERIC data base. These include the monthly abstract journal *Research in Education* (RIE) and its Semiannual and Annual Indexes; quarterly editions of the ERIC *Thesaurus* and *Source Directory;* annual editions of the rotated and hierarchical versions of the *Thesaurus;* an annual *Contract/Grant Number Index;* a quarterly *Report/Project Number Index;* a quarterly cumulative *Clearinghouse Number/ED Number Cross Reference Listing;* a *Title Index* to the entire data base; regular updates to the *ERIC Operating Manual, Directory of Clearinghouses,* and the *System Documentation;* and numerous other listings, compilations, and indexes. Staff of the Facility serve ERIC in an advisory or consultant capacity, as for example, serving on the Panel on Educational Terminology, participating in tape user seminars, or doing analyses of the data base. A heavy emphasis is placed by the Facility on scheduling, statistical reporting, and cost accounting (including unit cost reports), for purposes of management control.



For further information:
4833 Rugby Avenue
Suite 303
Bethesda, Maryland 20014
(301) 656-9723

ERIC RESEARCH IN EDUCATION

Research in Education (RIE) is a monthly abstract journal made up of resumes of education-related documents, and indexes to these resumes. RIE covers the broad field of education in all its aspects, announcing timely report literature and recently completed research results to make possible the early identification and acquisition of documents of interest to the educational community.

The resume section displays announcements of documents which have been cataloged, identified by an accession number (e.g., ED-123456), and indexed by subject terms from the ERIC *Thesaurus;* an abstract of about 200 words is also included for each of the approximately 1,200 documents in each issue. There is an indication in each resume of the availability of the document itself. In most instances, the document will be available from the ERIC Document Reproduction Service (EDRS), in microfiche (MF) and/or Hard Copy (HC). Where listed as "not available from EDRS," the alternative source from which it can be obtained is given.

The index sections provide subject, personal author, and institution (source) name access to the resumes; the indexes are also issued in semiannual and annual cumulations, the latter superseding all prior indexes for that year.

Research in Education is the principal mechanism the ERIC network uses to achieve bibliographic control over the diverse documents found in the field of education, and to announce them. It concerns itself primarily with the unpublished, limited distribution, or, as it is sometimes called, the "fugitive" type of literature, e.g., technical and research reports, speeches and "papers presented at," program descriptions, teacher guides, statistical compilations, curriculum materials, etc. (Journal literature is in turn covered by *Current Index to Journals in Education* (CIJE), a companion publication to RIE).

The documents announced in RIE are collected by the various ERIC Clearinghouses, screened and selected for quality and legibility, cataloged, indexed, abstracted, and transmitted to the central ERIC Processing & Reference Facility for inclusion in the computerized data base. The time from final selection to announcement in RIE varies between two and three months.

Individuals or organizations wishing to submit documents for possible announcement in RIE may send them (two copies preferred) either to Central ERIC, the ERIC Processing & Reference Facility, or directly to the appropriate Clearinghouse. (For addresses, see the other pertinent sheets in this brochure).

Research in Education (RIE) is directed toward the entire educational community (e.g., school administrators, teachers and supervisors, students, school board members, educational researchers, commercial and industrial organizations, and the public); this is well evidenced by the great variability in the types and sources of documents processed for inclusion in the journal.

RIE is distributed on a worldwide basis and can be found in the libraries of nearly all major educational institutions. It is a linchpin in the Educational Resources Information Center (ERIC) national information system which is dedicated to the progress of education through the dissemination of report literature and of educational research results.

SUBSCRIPTION INFORMATION

SUPERINTENDENT OF DOCUMENTS, U. S. GOVERNMENT PRINTING OFFICE, WASHINGTON, D. C. 20402

Annual Subscription (12 monthly issues)

Domestic: $38.00 a year (Cumulative Indexes not included)
Foreign: $47.50 a year (Cumulative Indexes not included)

Single Copies

Domestic: $ 3.25 per issue
Foreign: $ 3.25 per issue, plus postage

Cumulative Indexes

Cumulative indexes for the year are issued semiannually and annually. They are not included in the annual subscription prices cited above. Their price varies according to size. The last Semiannual Index was around $5.00; Annual indexes for the last few years have been priced as follows:

1967	$ 3.25 (out-of-print)	1970	$ 6.00 (out-of-print)
1968	$ 8.25	1971	$ 7.00 (out-of-print)
1969	$ 6.25	1972	$10.50

SAMPLE ENTRY

ERIC Accession Number – identification number sequentially assigned to documents as they are processed.

Author(s).

Title.

Organization where document originated.

Date published.

Contract or Grant Number – contract numbers have NE-C prefixes; grant numbers have NE-G prefixes.

Alternate source for obtaining documents.

EDRS Price – price through ERIC Document Reproduction Service. "MF" means microfiche; "HC" means hard copy. When listed "not available from EDRS", other sources are cited above.

ED 654 321 56 AA 123 456

Smith, John D. *Johnson, Jane*

Career Education for Women

Central Univ., Chicago, Ill.

Spons Agency – National Inst. of Education (DHEW), Washington, D.C.

Report No – CU-2081-S

Pub Date May 73

Contract – NE-C-00-2-0099

Note – 129p.; Presented at the National Conference on Career Education (3rd, Chicago, Ill., May 15-17, 1973)

Available from – Campus Bookstore, 123 College Ave., Chicago, Ill. 60690 ($3.25)

EDRS PRICE MF-$0.65 HC-$6.58

Descriptors – *Career Opportunities, Career Planning, Careers, *Demand Occupations, *Employment Opportunities, Females, Labor Force, Labor Market, *Manpower Needs, Occupational Aspiration, Occupational Guidance, Occupations, Vocational Counseling, *Working Women

Identifiers – Consortium of States, *National Occupational Competency Testing Institute, Illinois

Women's opportunities for employment will be directly related to their level of skill and experience but also to the labor market demands through the remainder of the decade. The number of workers needed for all major occupational categories is expected to increase by about one-fifth between 1970 and 1980, but the growth rate will vary by occupational group. Professional and technical workers are expected to have the highest predicted rate (39 percent), followed by service workers (35 percent), clerical workers (26 percent), sales workers (24 percent), craftsmen and foremen (20 percent), managers and administrators (15 percent), and operatives (11 percent). This publication contains a brief discussion and employment information concerning occupations for professional and technical workers, managers and administrators, skilled trades, sales workers, clerical workers, and service workers. In order for women to take advantage of increased labor market demands, employer attitudes toward working women need to change and women must: (1) receive better career planning and counseling, (2) change their career aspirations, and (3) fully utilize the sources of legal protection and assistance which are available to them. (SB)

Legislative Authority Code for identifying the legislation which supports the research activity (when applicable).*

Clearinghouse accession number.

Sponsoring Agency – agency responsible for initiating, funding, and managing the research project.

Report Number – assigned by originator.

Descriptive Note.

Descriptors – subject terms which characterize substantive content. Only the major terms, preceded by an asterisk, are printed in the subject index.

Identifiers – additional identifying terms not found in the **Thesaurus of ERIC Descriptors.**

Informative Abstract.

Abstractor's initials.

SUBJECT INDEX

AUTHOR INDEX

INSTITUTION INDEX

ERIC CURRENT INDEX TO JOURNALS IN EDUCATION

Macmillan Information,* a Division of the Macmillan Publishing Co., Inc., created *Current Index to Journals in Education* (CIJE) as a joint venture with the Educational Resources Information Center of the National Institute of Education. *CIJE* has been published monthly since January, 1969. In addition to this index to journal literature in the field of education, Macmillan Information has utilized the ERIC data base, as available on magnetic tape, for the preparation of a variety of publications. All ERIC related publications are available from Macmillan Information, 866 Third Avenue, New York, N.Y. 10022.

CURRENT INDEX TO JOURNALS IN EDUCATION

CIJE is the most complete guide for current awareness of all important educational periodical literature. Detailed indexing for articles in over 600 education and education-related journals are available in each issue. Over 17,000 articles are indexed yearly.

Directed to all librarians and educational researchers, *CIJE* includes:

- References to the most current periodical literature.
- Brief annotations outlining the scope and substance of most articles indexed.
- Subject, author, journal contents and main entry indexes.
- Semiannual and Annual Cumulations.

Current Index to Journals in Education

Monthly	$44.00
Monthly with Annual Cumulation	$77.00
Semiannual Cumulation	$15.00
Annual Cumulation—Hardbound	$33.00
Semiannual and Annual Cumulations	$45.00
Monthly, Semiannual and Annual	$83.00

ERIC EDUCATIONAL DOCUMENTS ABSTRACTS

These four volumes bring together, in succinct abstract form, reports covering every current, significant topic in the field of education.

They provide ready reference to trends and new curriculum developments, school operations, teaching methods, library services, and literally hundreds of other subjects of urgent concern to professional educators. Each abstract cites the author, source, publication date, availability, and price of the original report, and most abstracts provide a clear, concise summary of the report's contents and conclusions.

The set includes all reports which appeared in *Research in Education*, a monthly report announcement journal available through the Government Printing Office, from January, 1968 through December, 1971, with accession numbers ED 012349 through ED 054390. Calendar years are bound in separate volumes.

Five volumes, 1968/1969/1970/1971/1972, library binding	$155.00
Individual volumes	$35.00 each

ERIC EDUCATIONAL DOCUMENTS INDEX

For the first time in one source, the reference to all research documents in the ERIC collection: *Research in Education, 1966 through 1971; The ERIC Catalog of Selected Documents on the Disadvantaged;* and *Office of Education Historical Reports, 1956 through 1965.* Includes documents ED 001001 through ED 054390, plus a Subject Index with complete titles and ERIC accession numbers (ED numbers). Complete titles and ED numbers are also listed with each entry in the Author Index.

The ED numbers refer the user to abstracts published in *Educational Documents Abstracts*, to microfiche of the documents, and to copies of the original documents, obtainable from the ERIC Document Reproduction Service.

Two volumes, 1966-1969, library binding	$34.50
One volume, 1970-1971, library binding	$25.00
One volume, 1972, library binding	$25.00

*Formerly CCM Information Corporation.

THE ERIC INSTITUTION INDEX

These volumes bring together, for the first time, the corporate author listings for the research documents in the ERIC collection: *The ERIC Catalog of Selected Documents on the Disadvantaged, Office of Education Research Reports, 1956 through 1965, Research in Education, 1966 through 1971.* Includes documents ED 001001 through ED 054390. The Corporate Author Index includes complete titles and ERIC accession numbers. A useful companion volume to *ERIC Educational Documents Abstracts* and the *ERIC Educational Documents Index* (subjects and personal authors).

The ED numbers refer the user to abstracts published in *Educational Documents Abstracts*, to microfiche of the documents, and to copies of the original documents obtainable from the ERIC Document Reproduction Service. $15.00

THESAURUS OF ERIC DESCRIPTORS

The definitive vocabulary of education, developed and brought up-to-date by educators who review the literature in their field. The *Thesaurus* is the major source of subject headings used for indexing and for retrieval of documents and journals in the ERIC collection.

The *Thesaurus of ERIC Descriptors* will serve to give all educators an increased awareness of the language of their field. A useful tool for teachers, the student of education, and the information specialist. Superseding all previous editions, the 5th edition of the *Thesaurus of ERIC Descriptors* contains newly assigned descriptors as of December 1973.

Paperbound $6.95

ERIC DESCRIPTOR AND IDENTIFIER USAGE REPORT

An invaluable tool for computer searching of the ERIC data base, as well as a unique reference tool for information analysts and librarians without access to computer facilities.

Arranged in three sections

Section 1: ERIC Descriptors

Lists the accession numbers that have been indexed by each term from the *Thesaurus of ERIC Descriptors.* Includes both ED (ERIC Document) numbers as described in *Research in Education* and EJ (ERIC Journal) numbers as listed in *Current Index to Journals in Education.* Arranged alphabetically by descriptor.

Section 2: ERIC Identifiers

Lists the accession numbers that have been indexed by each identifier, a specialized indexing term that does not fall within the controlled vocabulary of the *ERIC Thesaurus.* Identifiers include acronyms, geographic place names, special projects.

Section 3: Statistical Data

For each descriptor and identifier, statistics are given on the total usage of each term as well as major usage, minor usage, and a breakdown of usage for the ED and EJ files.

This reference tool contains all listings for each term in the ERIC data base, including those terms which have not appeared in the RIE and CIJE published indexes. To be updated annually,

this current volume includes all ERIC descriptors and identifiers as of March 1973.

Library binding $40.00

ERIC INFORMATION ANALYSIS PRODUCTS 1967-1972

A five year cumulation of citations and abstracts of those publications which reflect information analysis activities produced by the network of ERIC Clearinghouses. Includes all substantial bibliographies, review papers, and state-of-the-art papers identified as ERIC publications.

Data were gathered by the ERIC Clearinghouse on Library and Information Sciences operated by the American Society for Information Science.

Entries in the bibliography are arranged alphabetically by the name of the Clearinghouse. Information about each item includes personal author, title, series name and number, journal reference, date of publication, type of publication, ERIC Document Number, availability, and a brief abstract. Includes a subject index using terms from the *Thesaurus of ERIC Descriptors.*

A separate bibliography of over 100 significant publications *about* ERIC is included as an appendix. Data for this appendix were gathered by the ERIC Processing & Reference Facility.

Clothbound $14.95

SPECIAL BIBLIOGRAPHIES

Career Education	Clothbound	$ 9.95
Early Childhood Education	Clothbound	$ 9.95
Educational Finance	Clothbound	$ 8.95
Library and Information Sciences	Clothbound	$ 9.95
Social Studies and Social Sciences	Clothbound	$ 9.95
Reading, an ERIC Bibliography	Clothbound	$ 9.95

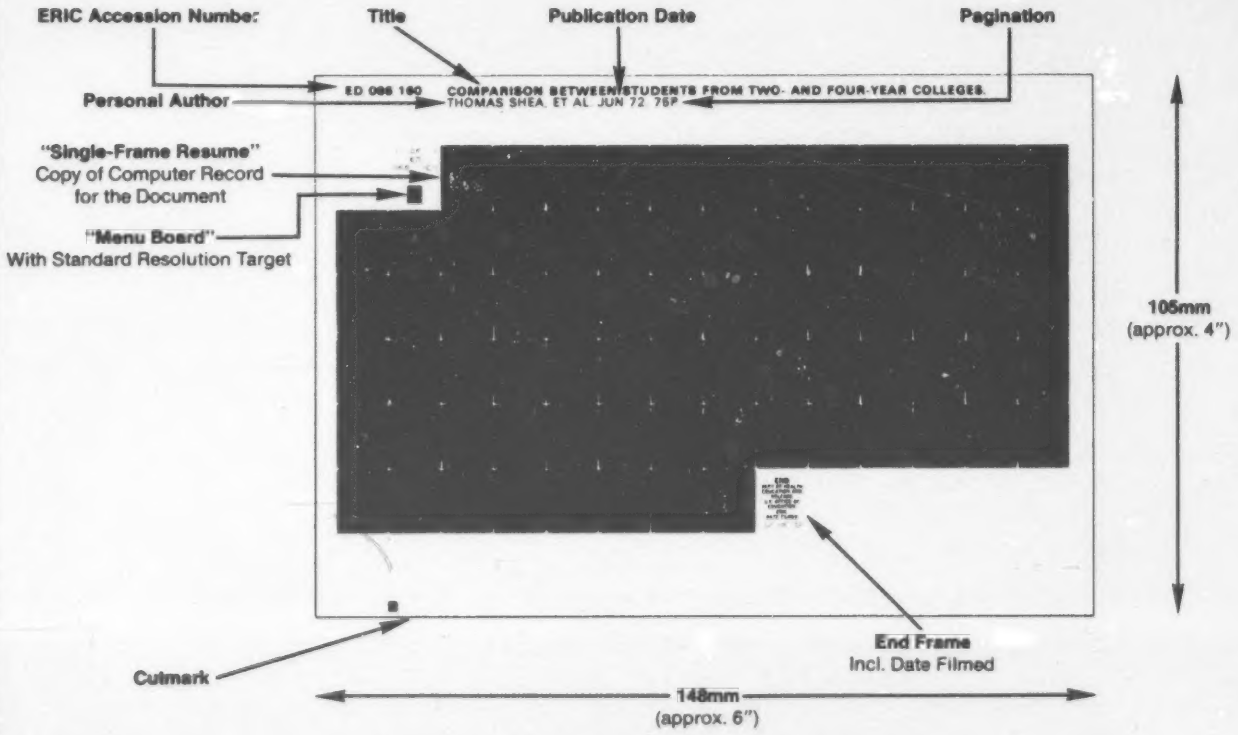
For further information:
[redacted]
New York, N.Y. 10022
212—935-3274

ERIC DOCUMENT REPRODUCTION SERVICE

EDRS is the document supply and distribution component of the ERIC network. All non-copyrighted documents (and any others for which reproduction permission has been obtained) announced in *Research In Education*, are forwarded to EDRS, where they are microfilmed and converted into microfiche (4" x 6" flat sheets of microfilm) according to Federal and National standards.

Interested users may obtain copies of ERIC documents from EDRS in either microfiche (at 24 x reduction) or paper copy form (at 100% original size). Orders are accepted on either an on-demand or subscription basis. Subscribers may order the entire microfiche collection (monthly this amounts to about 950 titles contained on about 1400 microfiche) or subsets of the entire collection (such as all the titles input by a particular Clearinghouse). There are currently over 500 organizations that subscribe to the entire ERIC collection on a continuing basis. These are made up of Federal agencies, universities and colleges, state and local education agencies, school systems, professional associations, nonprofit groups, etc. There are over thirty subscriptions in foreign countries. Individual users consist of teachers, faculty, students, researchers, planners, administrators, counselors, therapists, and numerous other members of the educational community.

Each document announced in *Research In Education* carries with it its EDRS price (or alternate source of availability). Individual on-demand microfiche are sold at a standard price of $0.65; individual on-demand paper copies are sold on a graduated scale dependent on size. Subscription microfiche are sold at a bargain basement price (in order to encourage subscriptions) that works out to slightly over $0.10 per microfiche or about $2,000 a year for around 17,000 microfiche.



TYPICAL ERIC MICROFICHE 24x REDUCTION 98 FRAMES (7 x 14)

Meets COSATI and NMA Standards

Announcement and distribution are coordinated so that microfiche subscribers will normally have on hand the complete month's microfiche at the time the abstract journal arrives. In this way, whenever an interesting item is detected in the journal, the user may immediately pull the item from the microfiche file and examine it without delay using a microfiche reader. The added convenience of instant feedback without having to wait for an order to be processed is another reason why prolific users tend to prefer subscriptions to on-demand procedures.

In summary, EDRS constitutes a permanent document archive for the literature of education. Research results need no longer be unobtainable after receiving their initial distribution or going rapidly out-of-print. They need only be submitted to the ERIC system to be permanently available for future generations of practitioners and other educators.

For further information:
P.O. Drawer O
Bethesda, Maryland 20014
(301) 588-6180

To Those in Education Who Have Questions

1. What's the Question?

What is Career Education?

What is involved in developing career education programs based on: school activities; commercial, business, or industrial experiences; home-centered activities?

2. The Thesaurus Has the Index Terms

BUSINESS • CAREER PLANNING • EDUCATIONAL PROGRAMS • HOME INSTRUCTION • HOME PROGRAMS • INDUSTRY • OCCUPATIONAL INFORMATION • SCHOOL INDUSTRY RELATIONSHIP • SCHOOLS • VOCATIONAL EDUCATION

3. The Question Formatted For Searching

(CAREER PLANNING **OR** OCCUPATIONAL INFORMATION **OR** VOCATIONAL EDUCATION) **AND** (BUSINESS **OR** INDUSTRY **OR** SCHOOL INDUSTRY RELATIONSHIP **OR** HOME INSTRUCTION **OR** HOME PROGRAMS **OR** EDUCATIONAL PROGRAMS **OR** SCHOOLS) **ANSWER**

4. These Are the Search Results

(ERIC document and journal article accession numbers)

ED-049882	ED-050295	ED-051399	ED-052472	EJ-022847
ED-050189	ED-050414	ED-052377	ED-052814	EJ-024398
ED-050264	ED-051398	ED-052424	EJ-022763	EJ-026754

5. Review the Abstracts

ED 050 295 VT 013 234

Marland, S. P., Jr.

Career Education – More Than A Name.

Department of Health, Education, and Welfare, Washington, D.C. Office of the Commissioner of Education.

Note – 14 p.; Speech Presented to the Meeting of State Directors of Vocational Education (Annual, Washington, D.C., May 4, 1971)

EDRS Price MF-$0.65 HC-$3.29

Descriptors – Career Opportunities, Careers, Education, Educational Finance, *Educational Innovation, *Educational Philosophy, Educational Programs, Educational Research, *Program Descriptions, Speeches, *Vocational Development, *Vocational Education

Identifiers – *Career Education

The career education concept should replace vocational education so that more of the American people can receive the benefits that are being provided students in vocational education. It is necessary to begin to construct a sound, systematized relationship between education and work, a system which will make it standard practice to teach every student about occupations and the economic enterprise and which will increase career options for each individual. The National Center for Educational Research and Development is concentrating on the development of three model career education programs. The first model, oriented directly toward the school setting, would affect kindergarten through junior college by reshaping the curriculum to focus directly on the concept of career development. The second model would be created, developed, operated, and supported primarily by business in companionship with the schools. This program would concentrate on the 13 to 20 age group who have left school without needed competences. The final model is a plan to use the home and community institutions to reach and teach persons with limited formal school and skills needed in successful employment. Such programs will give vocational education the national prestige that it needs. (GH)

6. ERIC has the answer!

Those who search ERIC can select information in microfiche or paper copy

This microfiche sample contains the complete document

TYPES OF INFORMATION IN ERIC

RESEARCH IN EDUCATION (RIE)

- ANNUAL REPORTS
- BIBLIOGRAPHIES
- BOOKS
- CONFERENCE PROCEEDINGS
- INSTRUCTIONAL PROGRAMS
- MANUALS
- POSITION PAPERS
- PROGRAM DESCRIPTIONS
- RESEARCH REPORTS
- REVIEWS
- SPEECHES
- NON-PRINT MATERIALS

CURRENT INDEX TO JOURNALS IN EDUCATION (CIJE)

APPROXIMATELY 600 EDUCATIONAL JOURNALS

SOURCES OF INFORMATION IN ERIC

CLEARINGHOUSES

- ISDs
- UNIVERSITIES (EDUCATION DEPARTMENTS; PROJECTS)
- OE
- RELs
- R&D CENTERS
- INDIVIDUALS

ERIC CLEARINGHOUSES

What they are:

*non-profit organizations

*funded by U.S. Office of Education

*coordinated by CENTRAL ERIC

*sponsored by educational organizations related to their field of interest

What they do:

*evaluate documents and process them for Research in Education (RIE), for Current Index to Journals in Education (CIJE), or for their local collection

*produce special bibliographies, state of the art papers, and interpretive summaries

*identify needed research

*create an atmosphere for rational change in education

General Information

The THESAURUS

is ERIC's Dictionary

With it: you can translate questions into ERIC terms and locate those terms and document titles in subject indexes of RIE and CIJE

Without it: you can look through subject indexes of RIE and CIJE. BUT—you won't get all that ERIC has on your question and you may miss getting an answer at all.

Not under "T" for TEACHER EDUCATION

INSERVICE EDUCATION
INSERVICE TEACHER EDUCATION
INTERGROUP EDUCATION

PRESCHOOL EDUCATION
PRESERVICE EDUCATION
PREVOCATIONAL EDUCATION

INSTITUTE TYPE COURSES
INSTITUTES (TRAINING PROGRAMS)

Looking up "ANIMATION"?

ANIMATION
USE MOTION

THESAURUS OF

ERIC

DESCRIPTORS

The Parts of the

THESAURUS

Five sections of the Thesaurus present ERIC terms (descriptors) and/or categories (groups) of terms

Each section differs in presentation and purpose

Also included—a bibliography of dictionaries, thesauri, glossaries, and other references

BIBLIOGRAPHY

DESCRIPTOR GROUP LISTING

SCOPE NOTES DESCRIPTOR GROUP

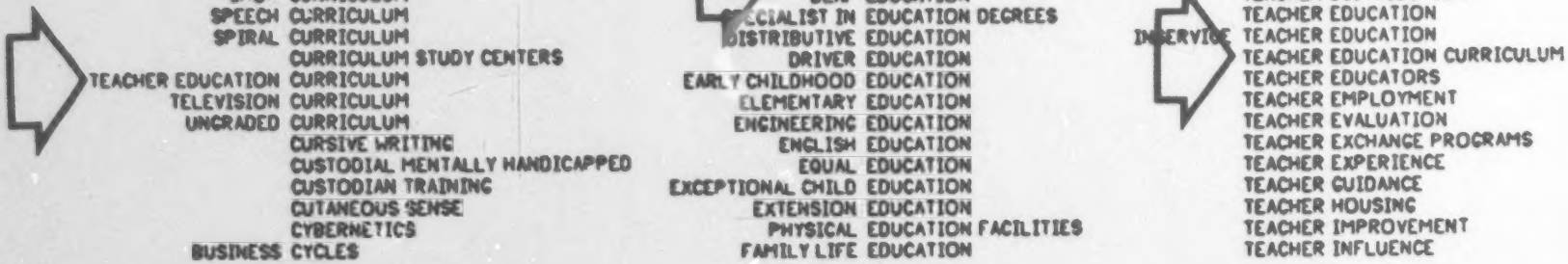
DESCRIPTOR GROUP DISPLAY

DESCRIPTOR LISTING

ROTATED DESCRIPTOR DISPLAY

The Rotated Descriptor Display

lists all of the ERIC terms alphabetically as many times as there are words in a term



Non-ERIC words are not included in the ROTATED DESCRIPTOR DISPLAY

ROTATED DESCRIPTOR DISPLAY

The Descriptor Listing

lists all ERIC descriptors (terms) alphabetically in large bold-faced type

Each term has displayed beneath it other ERIC terms and, sometimes, non-ERIC words which explain the meaning of the ERIC term and acquaint the user with related terms in ERIC

RT CULTURAL INTERRELATIONSHIPS
CULTURE

CULTURAL AWARENESS 040
UF CULTURAL UNDERSTANDING
RT CULTURAL BACKGROUND
CULTURAL FACTORS
CULTURAL OPPORTUNITIES
CULTURE
CULTURE CONFLICT
CULTURE CONTACT
NATIONALISM
SECOND LANGUAGE LEARNING

CULTURAL BACKGROUND 100
SN THE CUMULATIVE INTELLECTUAL, ARTISTIC, AND SOCIAL HERITAGE AND EXPERIENCE OF AN INDIVIDUAL OR GROUP, INCLUDING INSTITUTIONS, FOLKWAYS, LITERATURE, MORES, AND COMMUNAL EXPERIENCES
UF CULTURAL HERITAGE
NT ECONOMIC STATUS
EDUCATIONAL BACKGROUND
SOCIAL BACKGROUND
BT BACKGROUND
RT ADMINISTRATOR BACKGROUND
ANGLO AMERICANS
CULTURAL AWARENESS
CULTURAL TRAITS
CULTURE
ETHNIC GROUPS
ETHNOLOGY
NON WESTERN CIVILIZATION
WESTERN CIVILIZATION

CULTURAL CENTERS 210
RT CULTURAL ENRICHMENT
CULTURE
EDUCATIONAL COMPLEXES

CULTURAL CONTEXT 100
BT CULTURE
RT CULTURAL ENVIRONMENT
CULTURAL FACTORS
CULTURAL TRAITS
PROVERBS
SOCIAL CHARACTERISTICS
SOCIAL STRUCTURE
SOCIAL VALUES

DESCRIPTOR LISTING

The Descriptor Listing: The Parts of a Display

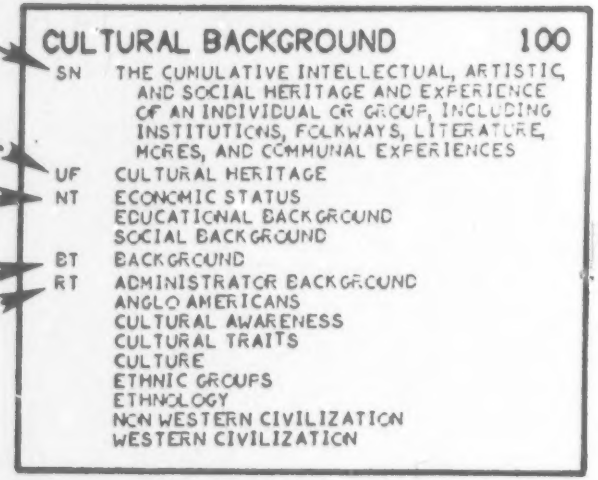
An ERIC term is USED FOR a non-ERIC term. If you open the DESCRIPTOR LISTING to a non-ERIC word, you will be directed to an ERIC term

A SCOPE NOTE is a definition
Not all ERIC terms have scope notes

NARROWER TERM(S)
each NT has its own listing

BROADER TERM(S)
each BT has its own listing

RELATED TERM(S)
each RT has its own listing



Parenthetical Qualifier applied to homographs

DESCRIPTOR LISTING

The Descriptor Listing: Inferring Meaning

The displays beneath ERIC terms do not always include SCOPE NOTES, because the meaning of an ERIC term can often be deduced after glancing over its UF's, NT's, BT's, and/or RT's

QUESTION: **What does MINORITY GROUP TEACHERS mean?**
Teachers of minority group students?
Teachers who are members of minority groups?

ANSWER: **From the display:**

110 MINORITY GROUP TEACHERS
NT NEGRO TEACHERS
BT TEACHERS
RT MINORITY GROUPS

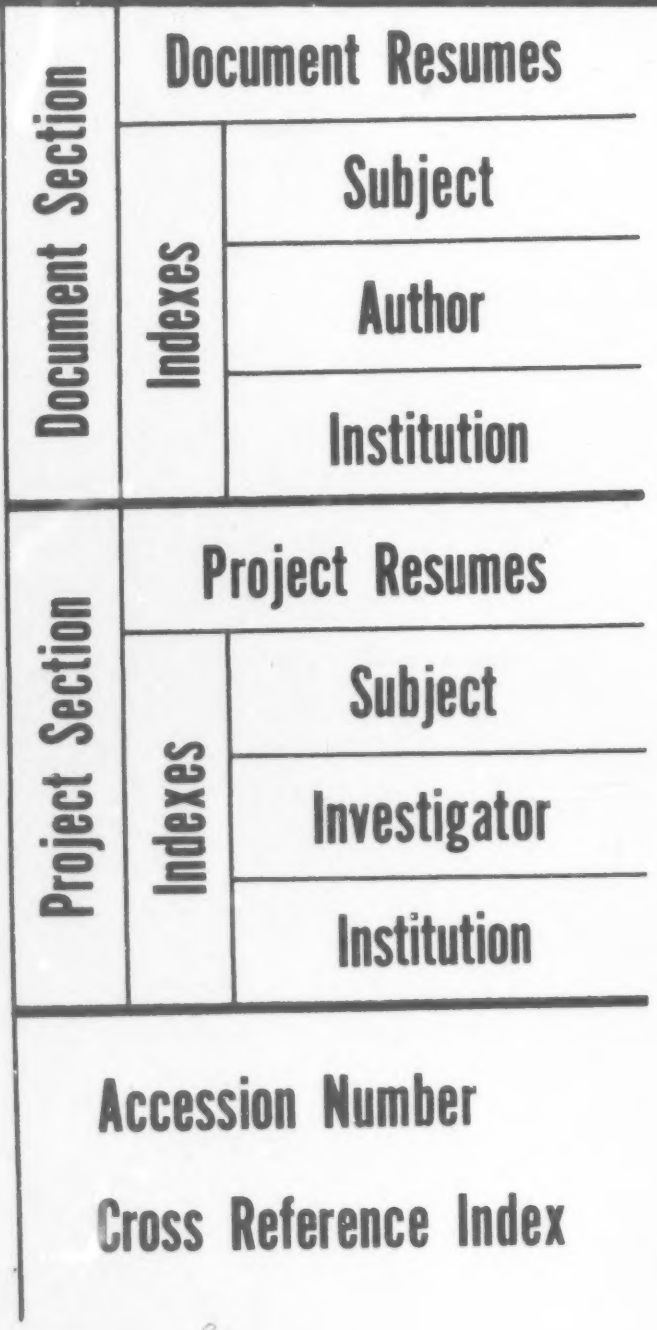
Since NEGRO TEACHERS are a kind of MINORITY GROUP TEACHER(S), MINORITY GROUP TEACHERS are those teachers who are members of minority groups

DESCRIPTOR LISTING

THE PARTS OF

RIE

Each monthly issue
is composed of these
sections and subsections



Written Communicative Ability: An Analysis and Treatment.
ED 031 470

Remedial Programs
Academic Performance and Persistence of Early Entry Institute Students.
ED 031 144
The Developmental Studies and Tutorial Programs: A Progress Report.
ED 031 231

Remedial Reading
The SWRL Tutorial Program: A Progress Report.
ED 031 451

Research
Annual Report of The Board of G
The Ontario Institute for Studies
031 176
A Beta Index to Confir
Closed System of F
ining: A Case Study
A Feasib
us of Purdue University.
tiona
ED 031 055
ion and Man--A Course Development
ject; Report Number 2. Final Report.
ED 031 089

Tutorial Programs
The Developmental Studies and Tutorial Programs: A Progress Report.
ED 031 231
Evaluation of an Interdisciplinary Approach to Prevention of Early School Failure. Follow-Up Study, Final Report.
ED 031 295
The SWRL Tutorial Program: A Progress Report.
ED 031 451

Underachievers
Academic Performance and Persistence of Early Entry Institute Students.
ED 031 144
The Palo Alto Study of Educationally Handicapped Children.
ED 030 924

Undergraduate Study
A New Era for Higher Education.
ED 031 432

Unemployed
Georgia Labor Mobility Demonstration Project. December 1, 1967-December 31, 1968. Final Report.

The Subject Index of each issue of RIE is made up of the major (asterisked) descriptors and identifiers used to index the document resumes in that issue

Titles of documents for which each term is used are listed under the term in ERIC document (ED) number order

the Sahara for Undergraduate Libraries.
ED 031 254

Preliminary Bibliography on East Asia for Undergraduate Libraries.
ED 031 253

Ellis, Allan B.
Can A Machine Counsel? Information System for Vocational Decisions. Project Report Number 17.
ED 030 910

Ellis, Elinor V.
The Role of the Curriculum Laboratory in the Preparation of Quality Teachers.
ED 031 457

Ellis, Patricia
The SWRL Tutorial Program: A Progress Report.
ED 031 451

Ervin, A. M.
New Northern Townsmen in Inuvik.

Evans, Arthur, Jr. 031 49
PAL--A Language D
gramming Lingu
ED 031 34

Eva
old
and their Avoidance in Teachin
onics.
ED 031 38

Niedermeyer, Fred C.
The SWRL Tutorial Program: A Progress Report.
ED 031 45

Nigro, George A.
A Beta Index to Confirm Causal Directions in Closed System of Five Variables.
ED 031 09

Nixon, Julian H.
Response to Challenge: The New York City Urban Corps.
ED 031 13

Nold, Joseph J.
[Colorado Outward Bound School. Report of the Director, 4968.]
ED 031 33

Norton, Daniel P.
Management Emphases in the Installation of an Evaluation Staff for Federally-Funded Project

Document Section

Indexes

Author

Authors are listed alphabetically by last name

The titles of the authors' works appear in ERIC document (ED) number order.

The ED number is the key to document resumes

1948/1968. Twenty Years of Progress in Higher Education.
ED 031 161

Southern Univ. and Agricultural and Mechanical Coll., Baton Rouge, La.
The Role of Incentives in Discrimination Learning of Children With Varying Pre-School Experience.
ED 031 290

Southwest Educational Development Lab., Austin, Tex.
Proceedings, National Conference on Educational Opportunities for Mexican Americans (Austin, Texas, April 25-26, 1968).
ED 031 345

Southwestern Cooperative Educational Lab., Albuquerque, N. Mex.
The American Indian High School Graduate in the Southwest.
ED 031 362
Proceedings of the Conference on the Use and Role of Teacher Aides (February 10-11, 1969).
ED 031 436

Southwest Regional Educational Lab., Inglewood, Calif.
The SWRL Tutorial Program: A Progress Report.
ED 031 451

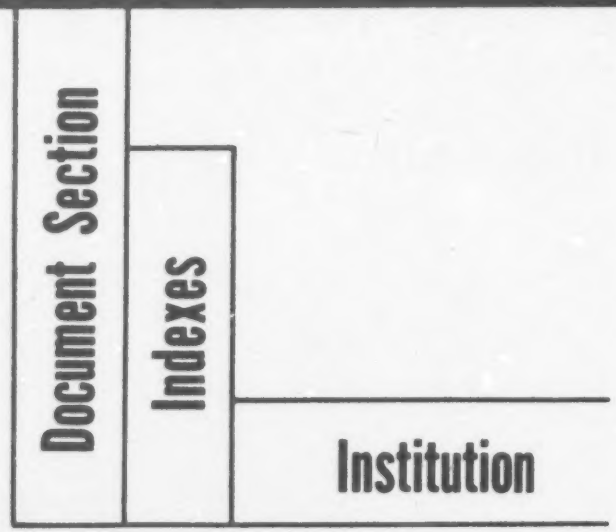
Southwest Region Planned Parenthood-World Population, Austin, Tex.
Family Planning Services Available to Migratory Farm Workers in the Mid-Continent Streams.
ED 031 328

Special Education Curriculum Development Center, Iowa City, Iowa.
Planning an Arithmetic Curriculum for the Educable Mentally Retarded. Special Education Curriculum Development Center; An In-Service Training Program.
ED 030 992

Stanford Research Inst., Menlo Park, Calif.
The Transferability and Retraining of Defense Engineers.
ED 030 838

Stanford Research Inst., Menlo Park, Calif. Educational Policy Research Center.
Conceptual Models of Educational Processes and an Inventory of Change Processes.
ED 030 973

Organizations responsible for documents appear in alphabetical order



Organization names are structured according to cataloging rules of the Committee on Scientific and Technical Information (COSATI)

Titles of documents appear under each organization in ERIC document (ED) number order

The ED number is the key to document resumes

Document Resumes

This is a resume:

ED 031 451 SP 002 943

Niedermeyer, Fred C. *Ellis, Patricia*

The SWRL Tutorial Program: A Progress Report.

Southwest Regional Educational Lab., Inglewood, Calif.

Pub Date 1 May 69

Note—18p.

Available from—Southwest Regional Educational Laboratory, 11300 La Cienega Blvd., Inglewood, California 90304

EDRS Price MF-$0.25 HC-$1.00

Descriptors—*Cross Age Teaching, Grade 5, Grade 6, Kindergarten, *Remedial Reading, *Tutorial Programs

Identifiers—Southwest Regional Laboratory Tutorial Program, SWRL Tutorial Program

Fifth- and sixth-grade students were trained by kindergarten teachers to tutor kindergarten pupils in reading by using highly structured practice exercises, selected by teachers for each pupil as part of the Southwest Regional Laboratory's First-Year Communication Skills Program. To measure the effectiveness of tutoring on the progress of pupils needing remedial reading instruction, postremediation performances of pupils receiving teacher-plus-tutor remedial instruction and of pupils receiving only teacher remedial instruction were compared in eight schools. Pupils who were tutored scored significantly higher on the postremediation tests, and pupils who were reading close to the acceptable level on initial tests were helped more by teacher-plus-tutor instruction than by a teacher alone (possibly because a teacher without a tutor must concentrate on the most deficient pupils). In addition, tutored pupils outperformed untutored pupils on a mid-term test on 14 out of 15 items. Modifications have been made in the tutoring program on the basis of finding that some pupils were not receiving all of the practice exercises and that tutors needed more training in certain skills. A final report will contain detailed accounts of tutor training procedures and program installation procedures as well as final pupil reports. (LP)

Resumes appear in order by

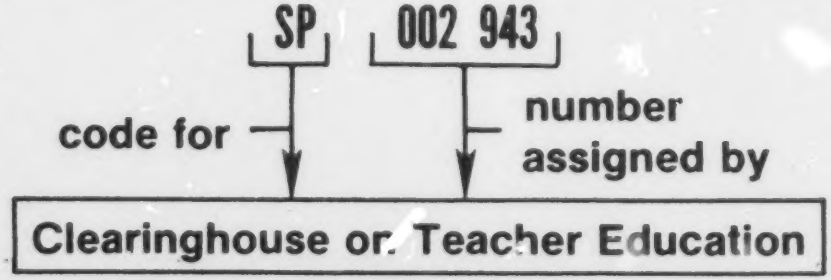
ERIC document number

ED 031 451

Handy to know:

Resumes are also in order by

clearinghouse accession number



Document Resumes

ED 031 451 SP 002 943

Siedermeyer, Fred C. *Ellis, Patricia*

The SWRL Tutorial Program: A Progress Report.

Southwest Regional Educational Lab., Inglewood, Calif.

Pub Date 1 May 69

Note – 18p.

Available from – Southwest Regional Educational Laboratory, 11300 La Cienega Blvd., Inglewood, California 90304

EDRS Price MF-$0.25 HC-$1.00

Descriptors – *Cross Age Teaching, Grade 5, Grade 6, Kindergarten, *Remedial Reading, *Tutorial Programs

Identifiers – Southwest Regional Laboratory Tutorial Program, SWRL Tutorial Program

Fifth and sixth-grade students were trained by kindergarten teachers to tutor kindergarten pupils in reading by using highly structured practice exercises, selected by teachers for each pupil as part of the Southwest Regional Laboratory's First-Year Communication Skills Program. To measure the effectiveness of tutoring on the progress of pupils needing remedial reading instruction, postremediation performances of pupils receiving teacher-plus-tutor remedial instruction and of pupils receiving only teacher remedial instruction were compared in eight schools. Pupils who were tutored scored significantly higher on the postremediation tests, and pupils who were reading close to the acceptable level on initial tests were helped more by teacher-plus-tutor instruction than by a teacher alone (possibly because a teacher without a tutor must concentrate on the most deficient pupils). In addition, tutored pupils outperformed untutored pupils on a mid-term test on 14 out of 15 items. Modifications have been made in the tutoring program on the basis of finding that some pupils were not receiving all of the practice exercises and that tutors needed more training in certain skills. A final report will contain detailed accounts of tutor training procedures and program installation procedures as well as final pupil reports. (LP)

CATALOGING PORTION

- Author(s)
- Title
- Source
- Publication date
- Number of pages
- Availability
- EDRS prices

Document Resumes

ED 031 451 SP 002 943

Niedermeyer, Fred C.; Ellis, Patricia

The SWRL Tutorial Program: A Progress Report.

Southwest Regional Educational Lab., Inglewood, Calif.

Pub Date 1 May 69

Note--18p.

Available from--Southwest Regional Educational Laboratory, 11300 La Cienega Blvd., Inglewood, California 90304

EDRS Price MF-$0.25 HC-$1.00

Descriptors--*Cross Age Teaching, Grade 5, Grade 6, Kindergarten, *Remedial Reading, *Tutorial Programs

Identifiers--Southwest Regional Laboratory Tutorial Program, SWRL Tutorial Program

Fifth- and sixth-grade students were trained by kindergarten teachers to tutor kindergarten pupils in reading by using highly structured practice exercises, selected by teachers for each pupil as part of the Southwest Regional Laboratory's First-Year Communication Skills Program. To measure the effectiveness of tutoring on the progress of pupils needing remedial reading instruction, postremediation performances of pupils receiving teacher-plus-tutor remedial instruction and of pupils receiving only teacher remedial instruction were compared in eight schools. Pupils who were tutored scored significantly higher on the postremediation tests, and pupils who were reading close to the acceptable level on initial tests were helped more by teacher-plus-tutor instruction than by a teacher alone (possibly because a teacher without a tutor must concentrate on the most deficient pupils). In addition, tutored pupils outperformed untutored pupils on a mid-term test on 14 out of 15 items. Modifications have been made in the tutoring program on the basis of finding that some pupils were not receiving all of the practice exercises and that tutors needed more training in certain skills. A final report will contain detailed accounts of tutor training procedures and program installation procedures as well as final pupil reports. (LP)

INDEX TERMS

Descriptors—those with asterisks are the terms under which this document appears in the Subject Index

Identifiers—additional helpful terms not available in ERIC's Thesaurus

Document Resumes

ED 031 451 SP 002 943

Niedermeyer, Fred C. Ellis, Patricia

The SWRL Tutorial Program: A Progress Report.

Southwest Regional Educational Lab., Inglewood, Calif.

Pub Date 1 May 69

Note--18p.

Available from--Southwest Regional Educational Laboratory, 11300 La Cienega Blvd., Inglewood, California 90304

EDRS Price MF-$0.25 HC-$1.00

Descriptors--*Cross Age Teaching, Grade 5, Grade 6, Kindergarten, *Remedial Reading, *Tutorial Programs

Identifiers--Southwest Regional Laboratory Tutorial Program, SWRL Tutorial Program

Fifth- and sixth-grade students were trained by kindergarten teachers to tutor kindergarten pupils in reading by using highly structured practice exercises, selected by teachers for each pupil as part of the Southwest Regional Laboratory's First-Year Communication Skills Program. To measure the effectiveness of tutoring on the progress of pupils needing remedial reading instruction, postremediation performances of pupils receiving teacher-plus-tutor remedial instruction and of pupils receiving only teacher remedial instruction were compared in eight schools. Pupils who were tutored scored significantly higher on the postremediation tests, and pupils who were reading close to the acceptable level on initial tests were helped more by teacher-plus-tutor instruction than by a teacher alone (possibly because a teacher without a tutor must concentrate on the most deficient pupils). In addition, tutored pupils outperformed untutored pupils on a mid-term test on 14 out of 15 items. Modifications have been made in the tutoring program on the basis of finding that some pupils were not receiving all of the practice exercises and that tutors needed more training in certain skills. A final report will contain detailed accounts of tutor training procedures and program installation procedures as well as final pupil reports. (LP)

ABSTRACT

an objective statement of the document's contents

the ERIC abstractor's initials

ERIC MICROFICHE*

The 4 x 6 inch sheet holds about sixty 8½ x 11 inch pages

A "microfiche reader" is required to bring pages back to readable size

Unless "Not Available from EDRS," documents in RIE are available from

ERIC Document Reproduction Service
P. O. Drawer O

Bethesda, Maryland 20014

***my-crow-feesh**

ERIC HARDCOPY

is a paper photocopy or facsimile of the original document

has a paper cover and is not hard bound

has a print size that is 70% of the original

Unless "Not Available from EDRS," documents in RIE are available from

ERIC Document Reproduction Service

P. O. Drawer O

Bethesda, Maryland 20014

The Parts of CIJE

Two supplementary listings

By subject:

INSERVICE TEACHER EDUC
Teaming of Principals Project After Th
Years, *Nat Elem Princ* v48 n4, pp17-23,
Feb '69 EJ 000 044

By author:

ANASTASIOW, NICHOLAS J.
Teaming of Principals Project After Three
Years EJ 000 044

Three main sections – three approaches to journal citations

By entry:

EJ 000 044 020 AA 500 785
Teaming of Principals Project After Three Years Anastasiow, Nicholas J.; Fischler, Abraham S., *Nat Elem Princ* v48 n4, pp17-23, Feb '69
*Principals, *Instructional Improvement, *Inservice Teacher Education, *Supervisory Methods, *Team Administration, Elementary School Supervisors, Teacher Supervi
Teaching, Teamwork

DESCRIPTOR GROUPS

SOURCE JOURNAL INDEX

SUBJECT INDEX

AUTHOR INDEX

MAIN ENTRY SECTION

The Descriptor Groups

list 52 general subject areas in the field of education and offer a brief explanation of the scope of each group

All citations related to a descriptor group appear together in the Main Entry Section

tion having for its aim the discovery of
e.g., Area Studies, Deaf Research, Experim
grams, Research Methodology, etc.

460 Resources

Source of supply, support or aid, such as Commun
Resources, Educational Resources, Natural Resourc
etc.

470 Schools

Institutions offering defined studies at defined leve
e.g., Catholic Elementary Schools, Day Schools, Hi
Schools, etc.

480 Social Sciences

Study of the functioning of human society and wi
the inter-personal relationships of individuals
members of society such as Behavioral Scienc
Communism, Economic Progress, Social Relatio
See also BEHAVIOR, SOCIOLOGY, RACE R
LATIONS.

490 Sociology

A broad Social Science which deals with the stu
of the structure of society, its groups, institutions, a
culture, primarily interested in the way people orga
ize themselves into groups, social classes, and ins
tutions such as Anti Segregation Programs, Chur
Role, Delinquency Causes, Family Characteristic
etc. *See also* SOCIAL SCIENCES, ORGANIZ
TIONS (GROUPS), RACE RELATIONS.

500 Standards

Morals, ethics, habits, requirements, etc., establish
by authority, custom, or an individual as acceptabl
e.g., Academic Standards, Behavior Standards, Cer
fication, Educational Specifications, Graduation R
quirements, Living Standards, State Standards, Teac
er Certification, etc.

510 Techniques

Processes, manipulations, or procedures required
any art, study activity, or production, e.g., Clas
room Games, Classroom Techniques, Creative Teac

DESCRIPTOR GROUPS

The Source Journal Index

lists alphabetically all journals covered by the ERIC Clearinghouses on a regular basis — over 500

provides information about the periodical:

- **Standard abbreviated form**
- **Full title (abbreviation in other sections)**
- **Cost per single issue**
- **Address of journal publisher**

NASSP Bull *NASSP Bulletin*, m (Sep-May), $4 J
National Association of Secondary School Princ
Street NW, Washington, D.C. 20036

Nat Bus Educ Assn Yearbook *National Busine
Association. Yearbook.*

Nat Bus Educ Quart *National Business Educatio*
National Business Education Association, 1201
NW, Washington, D.C. 20036

Nat Cath Guidance Conf J *National Catholic Gu
ference Journal*

Nat Counc Soc Stud Yearbook *National Cou
Social Studies. Yearbook.*

Nat Counc Teachers Math Yearbook *National
Teachers of Mathematics. Yearbook.*

Nat Elem Princ *National Elementary Principal;*
School Principals Department, National Education
1201 16th Street, NW, Washington, D.C. 20036

Nat Sch *Nation's Schools*, m, $12.00; sc $1.50; RA
Hill Publications, Circulation Department, 1050 I
Mart, Chicago, Illinois 60654

Nat Soc Stud Educ Yearbook *National Society fo
of Education. Yearbook.*

NATE Bull *NATE Bulletin*

NCEA Bull *National Catholic Education Associati*
q, $5.00; August issue separately, $2.00; Natior
Education
Washingto

NEA Res
National
1201 16th

NEA Res
Associatio

SOURCE JOURNAL INDEX

The Subject Index

is made up of the major (asterisked) descriptors and identifiers used to index the entries in each issue of CIJE

An entry may have as many as five major descriptors or identifiers—providing five approaches to one article through the Subject Index

EARLY CHILDHOOD EDUCATION
Opinions Differ: The Durham Education Improvement Project, *Todays Educ* v58 n2, pp62-64, Feb '69 EJ 000 506
For Better Results--A Full-Day Kindergarten, *Educ* v89 n2, pp217-221, Feb-Mar '69 EJ 001 108
Schools for Young Children: Organizational and Administrative Considerations, *Phi Delta Kappan* v50 n7, pp381-385, Mar '69 EJ 001 839
Media and Early Childhood Education, *Phi Delta Kappan* v50 n7, pp409-411, Mar '69 EJ 001 970
A Proper Curriculum for Young Children, *Phi Delta Kappan* v50 n7, pp406-408, Mar '69 EJ 002 144
Early Learning for What?, *Phi Delta Kappan* v50 n7, pp394-396, Mar '69 EJ 002 250
Seeking Continuity in Early and Middle School Education, *Phi Delta Kappan* v50 n7, pp397-400, Mar '69 EJ 002 251
Supergrow--or College Begins at Two, *Urban Rev* v3 n4, pp34-37, Feb '69 EJ 002 329
Teaching the Very Young: Procedures for Developing Inquiry Skills, *Phi Delta Kappan* v50 n7, pp389-393, Mar '69 EJ 002 685

EJ 002 251 140 AA 500 974
Seeking Continuity in Early and Middle School Education Strickland, Joann H.; Alexander, William, *Phi Delta Kappan* v50 n7, pp397-400, Mar '69
*Early Childhood Education, *Middle Schools, *Educational Objectives, *Child Development, *Sequential Learning, Curriculum, Innovation, Educational Policy, Educational Change, Educational Improvement

SUBJECT INDEX

The Author Index

- —lists articles alphabetically by author
- —gives authors' names in full when available
- —indexes both co-authors
- —indexes only the first author when there are more than two

EJ 002 251 140 AA 500 974
Seeking Continuity in Early and Middle School Education Strickland, Joann H.; Alexander, William, *Phi Delta Kappan* v50 n7, pp397-400, Mar '69
*Early Childhood Education, *Middle Schools, *Educational Objectives, *Child Development, *Sequential Learning, Curriculum, Innovation, Educational Policy, Educational Change, Educational Improvement

Does the American History Textbook Still Wear a Gray Flannel Cover? EJ 001 967

ALEXANDER, JAMES F.
Psychotherapy Process: Sex Differences and Dependency EJ 004 305

ALEXANDER, LAWRENCE T.
The Use of a Common Experiential Referent in Instructional System Design EJ 004 326

ALEXANDER, WILLIAM
Seeking Continuity in Early and Middle School Education EJ 002 251

ALEXANDER, WILLIAM M.
Evaluating the New Mi...
R...
...t of View EJ 004 338

STRICKLAND, JOANN H.
Seeking Continuity in Early and Middle School Education EJ 002 251
Who Goes to School? Is the Child Really There? EJ 001 411

STRICKLER, EDWIN
Family Interaction Factors in Psychogenic L...

STR...
Savi...

STR...
Crea...

AUTHOR INDEX

The Main Entry Section: Arrangement

Articles are listed under Descriptor Group Headings

Within each group, articles are arranged in EJ (ERIC Journal) number sequence

Explanation of the descriptor groups appears in the Descriptor Groups section

140 Education

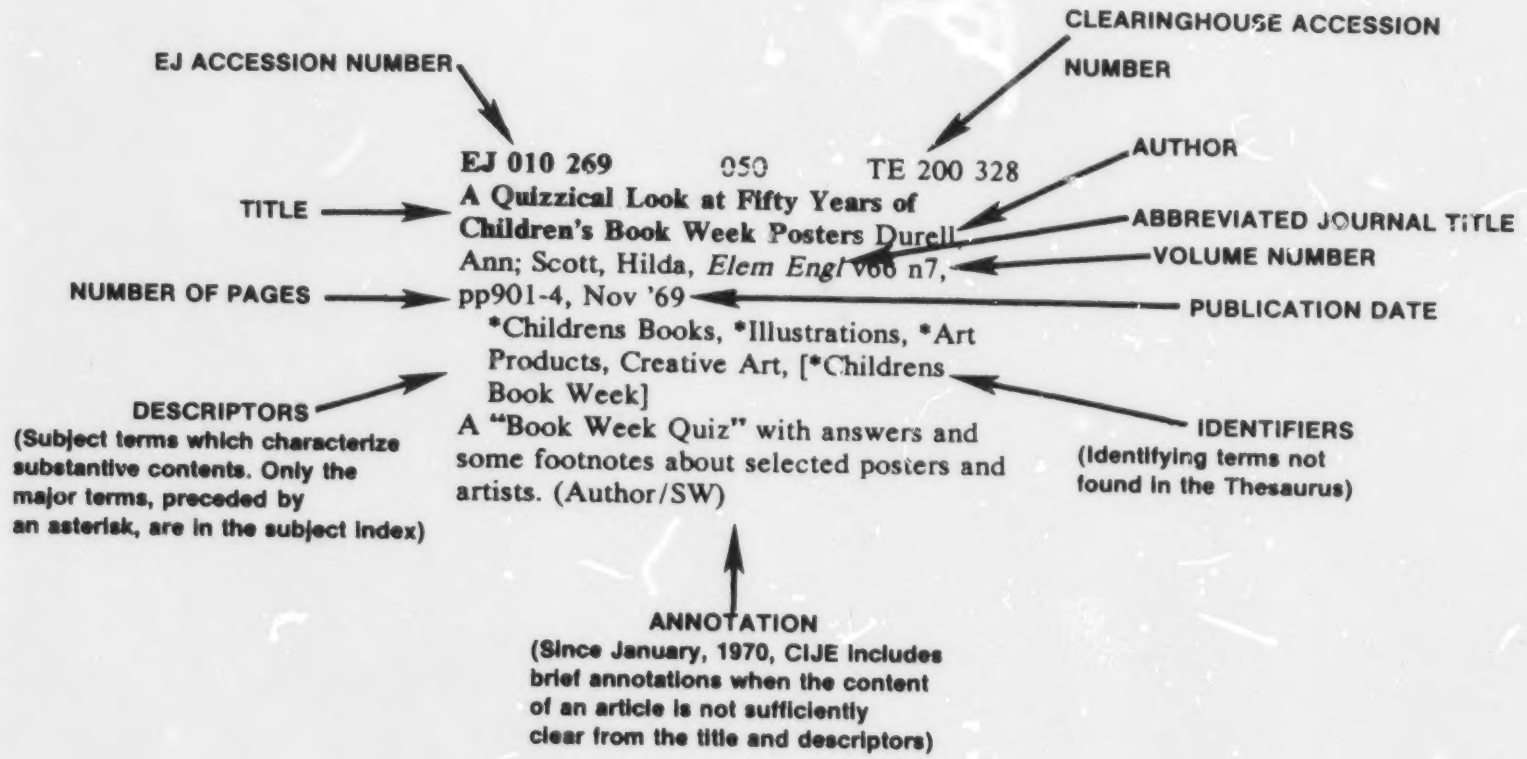
EJ 002 251 140 AA 500 9?
Seeking Continuity in Early and Middle School Education Strickland, Joann H.; Alexander, William, *Phi Delta Kappan* v5(n7, pp397-400, Mar '69
•Early Childhood Education, •Middle Schools, •Educational Objectives, •Chil Development, •Sequential Learning, Curriculum, Innovation, Educational Policy, Educational Change, Educationa Improvement

EJ 002 252 140 AA 500 9?
Sexuality and Sexual Learning in Childhoo Elias, James; Gebhard, Paul, *Phi Delta Kappan* v50 n7, pp401-405, Mar '69
•Learning Experience, •Sex Education, •Child Development, •Educational Responsibility, •Sexuality, Sex (Characteristics), Sex Differences, Childhood Attitudes, Interviews, Social Differences, [Alfred Kinsey]

EJ 002 253 140 AA 501 0?
Contemporary Concerns for the Secondary School Turano, John; Kelly, Eugene T., *Clearing House* v43 n7, pp387-391, Mar '6
•Educational Change, •Curriculum Design, •Secondary Education, Secondary Schools, Educational Objectives, Academic Standards

MAIN ENTRY SECTION

The Main Entry Section: An Entry


EJ ACCESSION NUMBER
CLEARINGHOUSE ACCESSION NUMBER
AUTHOR
TITLE
ABBREVIATED JOURNAL TITLE
VOLUME NUMBER
NUMBER OF PAGES
PUBLICATION DATE
DESCRIPTORS
(Subject terms which characterize substantive contents. Only the major terms, preceded by an asterisk, are in the subject index)
IDENTIFIERS
(Identifying terms not found in the Thesaurus)
ANNOTATION
(Since January, 1970, CIJE includes brief annotations when the content of an article is not sufficiently clear from the title and descriptors)
EJ 010 269 050 TE 200 328
A Quizzical Look at Fifty Years of Children's Book Week Posters Durell, Ann; Scott, Hilda, Elem Engl v66 n7, pp901-4, Nov '69
*Childrens Books, *Illustrations, *Art Products, Creative Art, [*Childrens Book Week]
A "Book Week Quiz" with answers and some footnotes about selected posters and artists. (Author/SW)

MAIN ENTRY SECTION

LOCATIONS OF ERIC MICROFICHE COLLECTIONS IN TEXAS

(prepared by TEA 10/27/72)

	Amarillo
Selected (NA)	Education Service Center, Region XVI 1601 S. Cleveland Amarillo, Texas 79102
	Austin
Full (2)	Southwest Educational Development Laboratory Suite 550, Commodore Perry Hotel (800 Brazos) Austin, Texas 78701
Full (1)	Texas Information Service 6504 Tracor Lane Austin, Texas 78721
Full (1)	The University of Texas at Austin Special Education Instructional Materials Center also their Education and Psychology Library Austin, Texas 78712
	Beaumont
Selected (NA)	Education Service Center, Region V 4455 Washington Boulevard (Box 3546) Beaumont, Texas 77704
	Canyon
Full (1)	West Texas State University Library Canyon, Texas 79015
	Commerce
Full (2)	East Texas State University Library Commerce, Texas 75428
	College Station
Full (1)	Texas A & M University Library College Station, Texas 77843
	Dallas
Selected (NA)	Bishop College Dallas, Texas 75241

Key:

(1) Open to Public
(2) Limited to organizational use
(NA) Information not available

	Dallas
Full (1)	U.S. Office of Education, Region VI Division of Research 1114 Commerce Street Dallas, Texas 75202
Full (NA)	Education Service Center, Region X P.O. Box 1300 Richardson, Texas 75080
	Denton
Full (1)	North Texas State University Library Special Materials Section North Texas Station Denton, Texas 76203
NA (1)	Texas Woman's University Library Box 3715 Texas Woman's University Station Denton, Texas 76201
	El Paso
Full (2)	Educational Service Center, Region XIX 6501-C Trowbridge El Paso, Texas 79905
	Edinburg
Full (1)	Pan American University Library Edinburg, Texas 78539
Selected (NA)	Education Service Center, Region I 101 S. Tenth P.O. Box 307 Edinburg, Texas 78539
	Huntsville
Full (1)	Sam Houston State University Huntsville, Texas 77340
	Hurst (Fort Worth)
Full (NA)	Tarrant County Junior College Northeast Campus Library Hurst, Texas 76053

	Kilgore
Very Selected (NA)	Education Service Center, Region VII Box 1622 Kilgore, Texas 75662
	Kingsville
NA (1)	Texas A & I University Library Kingsville, Texas 78363
	Lubbock
Full (a)	Texas Technological University Library Lubbock, Texas 79409
Selected (NA)	Education Service Center, Region XVII 713 Citizens Tower Lubbock, Texas 79401
	Laredo
NA (NA)	Texas A & I University at Laredo, Library Laredo, Texas 78040
	Mount Pleasant
Full (2)	Education Service Center, Region VIII Box 1258 100 N. Riddle Street Mount Pleasant, Texas 75455
	Nacogdoches
Full (NA)	Stephen F. Austin State University 1534-Library Nacogdoches, Texas 75961
	Odessa
Full (1)	Ector County Independent School District Curriculum Library Odessa, Texas 79760
	San Angelo
Selected (NA)	Angelo State University San Angelo, Texas 76901

	San Antonio	
Full	Our Lady of the Lake College	
(1)	411 S. W. 24th Street	
	San Antonio, Texas 78207	
	Sherman	
Full	Austin College	
(NA)	Sherman, Texas 75090	
	Wichita Falls	
Full	Education Service Center, Region IX	
(2)	2000 Harrison	
	Wichita Falls, Texas 76309	

ACTIVITY: USING THE ERIC THESAURUS

Notes to the Instructor

It is suggested that trainees be given the paper "Selecting Search Terms" as background reading and also be directed to the introductory essay, "The Role and Function of the Thesaurus in Education" by Dr. Frederick Goodman which appears in the ERIC Thesaurus. The instructor may also wish to use the transparency masters (from Clearinghouse on Teacher Education) dealing with the Thesaurus in his presentation. Special attention should be given to the Main Entry Section and the Rotated Descriptor Display in presenting the use of the Thesaurus.

The instructor may solicit questions from trainees or suggest his own for practice in finding appropriate descriptors. Each question might be considered by the whole group with suggestions for descriptors from the floor. Or, if the group is too large, small groups of approximately five trainees might work together finding descriptors for one question. The instructor should note that each participant should have access to a copy of the Thesaurus of ERIC Descriptors.

SELECTING SEARCH TERMS

Information storage and retrieval are, in a sense, forms of communication. In this specific area, valid communication occurs only when the originator of an idea and the recipient of that idea share, on some level, a common experience. In information storage and retrieval, the communications problem is basically a semantic, as well as syntactical, one. The originator of a document must have a precise and efficient means of conveying his information to any individual who has need of such information. To complete the transaction, a well-developed information system is necessary. If the document has been stored in an organized information system, locating that document will not be difficult for the searcher. If the searcher understands the way in which the information system has been constructed, he will require a minimum of assistance in locating information relevant to him. The crucial element which makes the communication link between supplier and searcher possible is a well-organized index within the retrieval system. Such an index will provide the common "experience set"[1] between originator and searcher.

To conduct a successful information search, the searcher must have the ability to translate his query into a problem statement compatible with the information system; his problem statement would ideally contain the same index terms as those used in the information retrieval index. The user can then query the storage system and retrieve the information he is seeking. In a sense, the communication between an information searcher and a storage system is similar to face-to-face communication. It is only when two individuals are speaking a language common to both that communication occurs. The same is true when an information searcher uses a storage system to retrieve items of interest. He must be familiar with the language used within the storage system in order to obtain results. In this case, "language" would refer to search terms, also called subject headings, key words, or descriptors, depending on which storage system is to be used by the information searcher. Search terms are the basic communication tools which permit good information retrieval.

Defining search terms is the reverse of the process of indexing or classifying. When the searcher interrogates a document file, he goes through some of the same thought processes as an indexer. The following description of how an indexer proceeds gives some indication of the complexity of the indexing process. Many times, individual judgments can differ. Such discrepancies can produce different outcomes in the specificity and size of an index.

To begin, the indexer analyzes a representative number of documents to be included in a data bank. He then assigns several descriptive terms to each document. The specific number of terms assigned to a document often varies

---

[1] Bertrand C. Landry and James E. Rush. Opinion paper: toward a theory of indexing. Journal of the American Society for Information Science. Vol. 21, No. 5. Sept.-Oct., 1970. p. 359.

according to the document or the capacity of the particular retrieval system used. The indexer compiles and analyzes a list of all the terms used to index all the representative documents. This procedure eliminates redundancy, aids in the combination of synonyms, and, if necessary, introduces higher generic terms or breaks down generic terms into more specific ones. The result is a "thesaurus," or "list of subject headings," or "index." Once the thesaurus is highly developed, it becomes the basic tool for indexing of documents to be included in the information system.

In summary, then, the indexer attempts to reduce the volume of information which a searcher has to examine by organizing access to the collection. The indexer accomplishes this through his "recognition of useful similarities between documents and the establishment of useful groups based on these similarities"[2] and, finally, through assignment of descriptive index terms to the groups.

The searcher, whose objective is to retrieve from a document collection only those documents which are "relevant" to him, must go through the reverse of this process. He must first ascertain what terms might represent the documents in the index and then use these terms to examine the collection and locate documents. To devise a list of terms, the searcher should have some knowledge about the content area of the problem. He should also know how the collection he will search is organized and make decisions about whether his search should result in a "high recall ratio" or a "high precision ratio."[3] If the desired result is a high recall ratio, the searcher has answered positively the following question: "Do I need to retrieve from the collection the maximum number of documents which may be 'relevant,' at the cost of retrieving an unspecified number of irrelevant documents?" (An example of a situation in which this result would be desirable might be a patent search, in which it is critical that all previous work done be uncovered, even at the expense of sorting through a great volume of irrelevant material.) If the desired result is a high precision ratio, the searcher has decided that it is more desirable to reduce the number of irrelevant documents and take the chance that some relevant ones might be omitted. (An example of such a situation might be in literature searches in the social sciences, where similar information is frequently reiterated in a variety of formats.)

How does the searcher actually identify and select those terms which will provide the most direct access to the system or collection he wants to use? Here, empathy and a sense of analogy, as well as knowledge of the subject

---

[2] C. W. Cleverdon et al. Factors determining the performance of indexing systems, vol. I: Design. Cranfield: 1966. p. 40.

[3] Susan Artandi. The searchers--links between inquirers and indexes. Special Libraries, Vol. 57, No. 8, Oct. 1966. p. 572.

matter, are indispensable. The searcher can enter the system by trying several "obvious" choices ("natural language" terms) selected from the problem statement. Furthermore, by thinking through the implications of the problem statement, it is often possible to derive other applicable descriptive terms. Deriving synonyms and antonyms may also be an additional source of terms.

The next logical step for the searcher is to categorize or arrange the terms in some system of headings and subheadings. During this process, additional terms or topic headings may occur to the searcher.

It is important to remember that a large number of search terms are needed because all indexes are not based on the same language and therefore only some terms are useful in working with any one index. As Harold Borko, one of the authorities in the field of information retrieval, has pointed out, "there is no theoretical basis by which one can optimize the selection of index terms--...there is no one best set of terms."[4] Conversely then, there are no definite rules for ascertaining those search terms which will prove "most effective" for use in entering a particular information storage system. If a list of subject headings or "thesaurus" is available, the searcher can use this tool to expand his terminology and to make the search a comprehensive one. The importance of using a thesaurus as an aid is more apparent when the searcher is dealing with a mechanized retrieval system; however, it can also be an invaluable tool for a manual search.

The initial compilation of search terms should be as thorough as possible, but should always be considered as a tentative list until the searcher consults the system's index and verifies that the selected search terms "match" those of the indexer. It is then possible to expand further the list of terms by browsing through the index for related terms. It should be emphasized that an important step in searching is to maintain lists for all search terms and the indexes to which they are applied. The searcher may be reviewing a variety of indexes and checking several issues of any one index; as a result, a frequent search error is the discovery of new terms and failure to apply them consistently to each index reviewed.

With the rapid growth of mechanized retrieval systems, a great debate concerning the problems of indexing and retrieval has been renewed--a debate too detailed for discussion here. One generalization about the impact of mechanization on the process of indexing--and hence on retrieval--is pertinent, however. The method by which documents are stored, as well as the content of the documents, influences the way a collection is indexed. Is the document to be described in natural language or code? How many index terms are to be applied to each document? These are only two factors related to document storage which may influence the development of index terms. If full-size, hard-copy documents are to be shelved and available for browsing, the need for a large number of index terms is eliminated because the

---

[4]Harold Borko. The conceptual foundations of information systems. A symposium paper. Santa Monica, California: System Development Corporation, May 1965. p. 26.

classification system will place related documents together on a shelf. If the documents are to be stored via computer or in microform, however, the capability for browsing among documents on a shelf does not exist. Many large-scale mechanized systems, therefore, rely on the assignment of a great number of key words to describe the document and thus provide the access points for retrieval. The ERIC information system is an example.

In summary, we see how a searcher's strategy can be influenced by the specificity and size of the terms in the index and also by the arrangement and physical characteristics of the file in which documents are stored. We can conclude that, in practice, effective retrieval cannot be separated from a thorough knowledge of the specific type of information system being used.

Additional References

Artandi, Susan. The searchers: links between inquirers and indexes. Special Libraries, Vol. 57, No. 8, Oct., 1966. pp. 571-574.

Borko, Harold. The conceptual foundations of information systems. A symposium paper. Santa Monica, California: System Development Corporation, May 1965.

Gulick, Melba C. Nonconventional data sources and reference tools for social science and information and humanities. College & Research Libraries. Vol. 29, No. 3, May, 1968. pp. 224-234.

Landry, Bertrand C. and James E. Rush. Opinion paper: toward a theory of indexing. Journal of the American Society for Information Science, Vol. 21, No. 5, Sept.-Oct., 1970. pp. 358-367.

Langridge, Derek. Subject headings. Training in industry. G. Norman Knight (ed.). Cambridge, Massachusetts: The M.I.T. Press, 1969. pp. 75-85.

Meadow, Charles T. The analysis of information systems: a programmer's introduction to information retrieval. New York: John Wiley & Sons, Inc., 1967.

Rubinoff, Morris and Don C. Stone. Semantic tools in information retrieval. University of Pennsylvania, May, 1967. (Available from the Clearinghouse for Scientific and Technical Information AD 660087.)

Vickery, B.C. Techniques of information retrieval. Connecticut: Archon Books, 1970.

Williams, Martha E. People, machines and information. A technical paper. Dearborn, Michigan: American Society of Tool and Manufacturing Engineers, 1967.

THE MAIN IDEA SYSTEM FOR ORGANIZING ERIC DESCRIPTORS

Perhaps one of the most important tasks involved in the TIS/EIC role is the conversion of search requests into ERIC terms and the organization of these terms for retrieval. This paper is an attempt to outline a method for organization of terms in such a way that all major concepts are covered and the descriptors are ready for computer searching. For convenience sake, the method may be called the Main Idea System.

After the consultant has worked with the client to clarify a search request and has a clear problem statement before him, he must put the question statement into ERIC terms that can be used for manual or computer searching. This first involves use of the ERIC Thesaurus to select appropriate descriptors based on the information gleaned from the question negotiation procedure. But many EICs new at the job of finding search terms ask: How many descriptors do I need? How do I know when I've adequately covered the topic? When are descriptors not closely enough related to be used?

The Main Idea System works in the following manner:

1. Using the problem statement formulated during the question negotiation interview, underscore or note main ideas you see in the question.

   Example: We need information on teacher training for Bilingual Programs in our elementary schools.

2. List these main ideas across the page, making a separate column for each concept.

   Teacher Training Bilingual Programs Elementary Schools

3. Then, in each column list descriptors that define that concept. From 3 to 8 descriptors in each column is fairly average.

   Example:

Teacher Training	Bilingual Programs	Elementary Schools
Teacher Education	Bilingual Education	Elementary Schools
Inservice Teacher Education	Bilingual Schools	Elementary Grades
Preservice Education	Bilingual Students	Elementary Education
Teacher Workshops	Bilingual Teachers	Grade 1
	Bilingualism	Grade 2
	Biculturalism	Grade 3
		Grade 4
		Grade 5
		Grade 6

From lists of descriptors organized in this way the retrieval specialist can efficiently input the question to the computer system or search manually. In computer application, each of the "Main idea" lists would probably be a set with terms connected by OR. For coordination between groups the AND command would be appropriate in this example case, but AND NOT might be used in other instances.

Worked out on the computer the search strategy below results from the example question:

```
PROG:
SS 1 /C?
TEACHER EDUCATION OR INSERVICE TEACHER EDUCATION OR PRESERVICE
EDUCATION OR

PROG:
CONT 1

USER:
TEACHER WORKSHOPS

PROG:
PSTG (7924)

SS  2 /C?
USER:
BILINGUAL EDUCATION OR BILINGUAL SCHOOLS OR BILINGUAL STUDENTS OR

PROG:
CONT 2
USER:
BILINGUAL TEACHERS OR BILINGUALISM OR BICULTURALISM

PROG:
PSTG (1236)

SS  3 /C?
USER:
ELEMENTARY SCHOOLS OR ELEMENTARY GRADES OR ELEMENTARY EDUCATION OR

PROG:
CONT 3
USER:
GRADE 1 OR GRADE 3 OR GRADE 4 OR GRADE 5 OR GRADE 6

PROG:
PSTG (6445)

SS  4 /C?
USER:
1 AND 2

PROG:
PSTG (155)
```

SS 5 /C?
USER:
3 AND 4

PROG:
PSTG (25)

The Main Idea System has proven useful in two major ways. First, the EIC writing descriptors is helped to organize his thinking and is sure to take into account all the parameters of the question he has negotiated. Secondly, the searcher can see readily what main ideas are included in the request, in the judgement of the consultant who has actually talked with the client, and can readily convert these main ideas into a manual or computer search strategy.

COORDINATE INDEXING AND COMPUTER SEARCHING OF ERIC

A number of computer systems have been designed to search the ERIC data base. Familiarity with their operating principles can provide insights into general principles of information retrieval and into the organization of the ERIC data base.

The organizing principle of the ERIC system that permits computer searching is Coordinate Indexing. Each document in the ERIC system has been assigned several descriptors (or index terms). Further, the terms assigned each ERIC document deal with two or more significant aspects of the content of the document, e.g., grade level, subject matter area, or teaching techniques used. Several of these parameters are indicated in the descriptors assigned the document so that the parameters may be coordinated by the searcher and the most relevant documents may be retrieved.

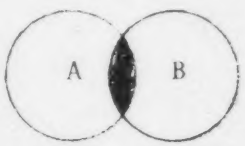
> Example: Let us assume that documents having to do with teacher training for early childhood education are sought. Let us say that the searcher finds the following documents listed under the following descriptors:
>
> | Early Childhood Education | | Teacher Education | |
> |---|---|---|---|
> | ED 045 932 | ED 054 639 | ED 045 925 | ED 054 639 |
> | ED 036 425 | ED 038 472 | ED 037 416 | ED 038 472 |

The document indexed by both terms being searched (in our hypothetical case, ED 054 639) is most likely to satisfy the conditions of the original problem statement. This example illustrates in a simplified fashion computer program operation. The computer compares lists of ED or EJ numbers found under various index terms and reports "matches" found.

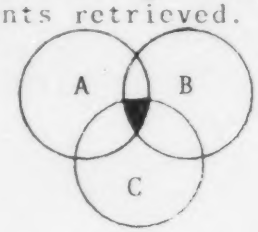
Because of the potential advantages of speed and comprehensiveness afforded by the computer, the trend toward automation of information is continuing. It is pertinent for the user to remember that, even though a system is mechanized, it will still involve the human element, both in setting up the system and in retrieving documents from it. The searcher's skill in managing the system will therefore be the important criterion affecting accomplishment of a successful search.

Let's examine how the computer system is used to perform a search of the ERIC document file. A searcher first has to select from the ERIC *Thesaurus* one or more descriptors which appear to describe his search question. When the searcher selects only one descriptor, the computer will retrieve from the file all of the documents assigned that descriptor. This operation will probably produce a large number of documents, of which a high percentage are likely to be only peripherally relevant.

When a second descriptor is selected and used along with the first descriptor, the number of documents found to be indexed by both descriptors and, hence, retrieved, will be much smaller. Probably fewer "irrelevant" documents would be retrieved, too. This operation may be diagramed as follows:

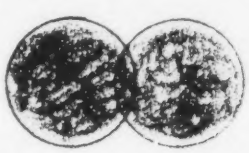


Here the first descriptor is labelled, "A;" the second, "B". The circles represent the documents indexed by these descriptors. When one combines the descriptors, or uses the AND command, the number of documents retrieved, i.e., the shaded area where A and B overlap, is smaller and, probably, more directly relevant. In a system as large as ERIC, it might be advantageous to enter yet a third AND command using descriptor "C" to delimit further the number of documents retrieved. This operation can be depicted as:



It should be noted, however, that, in this case, some desirable documents may not be retrieved.

Conversely, if one uses an OR command, a larger number of documents will be retrieved from the file than with either A or B alone, as depicted in this diagram:



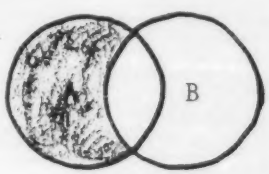
In this operation, all documents indexed by either descriptor A or descriptor B are retrieved. Use of this OR command might be appropriate when only a limited number of documents are found entered under one descriptor. The searcher can then enlarge that number by entering the command,(A) OR (B) The OR command also helps to insure that as many relevant descriptors as feasible are investigated.

In actual search operations, the searcher would enter various combinations of the AND and OR commands to achieve the desired results.

In one example case, the term "curriculum guides" was expanded using the OR command. The searcher selected from approximately 50 related terms listed in the *Thesaurus* six terms related to "curriculum guides." The computer combined all documents listed under these six terms. The result was 1977 document citations. The searcher repeated this combining process (using OR logic) for the term, "ethnic groups," selecting six of the 33 related terms in the *Thesaurus*. The result was 509 document citations.

The searcher, at that point, had two large sets of documents which he then delimited by entering the AND command for the group of terms related to "curriculum guides" and those related to "ethnic groups." The resulting set of 46 documents contained only those which were indexed by at least one "materials" term and one "ethnic group" term. The searcher could then review these to make further judgments about their relevance to his search problem. Hopefully, by this sequence of combining operations, the searcher retrieved a high percentage of "relevant" documents from the system.

A third logic term "AND NOT" is also available for use in most computer systems. It, of course, is used to exclude unwanted documents from the final list. Its use may be represented as follows.



In this case, all documents having only descriptor A would appear. This type of logic would exclude all those documents that had descriptor B as well as A assigned. The AND NOT command may be used in combination with the AND and OR commands as described above.

In summary, then, computer searching capability is built upon the coordinate indexing system that ERIC employs. The searcher, either manually or using a computer system is allowed to combine at least two terms at the same time to locate, as well to control the amount of, information relevant to a search question. The Boolean operators AND, OR, and AND NOT are used in computer systems to combine the terms. Thus, computer searching of ERIC is possible because of (1) coordinate indexing in the data base itself and (2) the computer's capability to create and manipulate sets using Boolean logic.

A TYPICAL SEARCH REQUEST

As stated on User Request Form: What kinds of training would be most helpful to educators moving into a middle school?

Key Words:	Middle School	educator training
Descriptors:	Middle Schools	Inservice Teacher Education
	Junior High Schools	Teacher Workshops
		Inservice Education
		Inservice Programs
		Inservice Courses
		Administrator Education

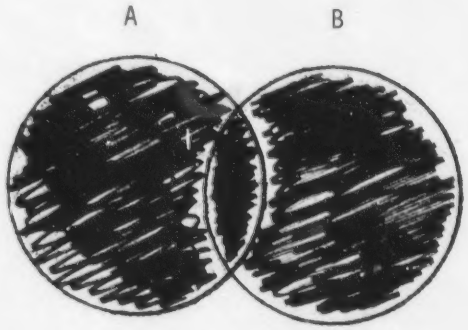
As coded for the Computer: (MIDDLE SCHOOLS .OR. JUNIOR HIGH SCHOOLS) .AND. (INSERVICE TEACHER EDUCATION .OR. TEACHER WORKSHOPS .OR. INSERVICE EDUCATION .OR. INSERVICE PROGRAMS .OR. INSERVICE COURSES .OR. ADMINISTRATOR EDUCATION)$

Accession numbers found: 44

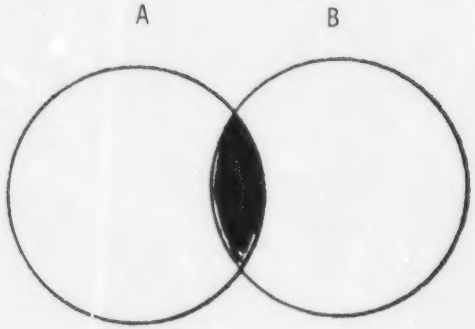
Abstracts printed: 44

COMPUTER APPLICATION OF SEARCH STRATEGY

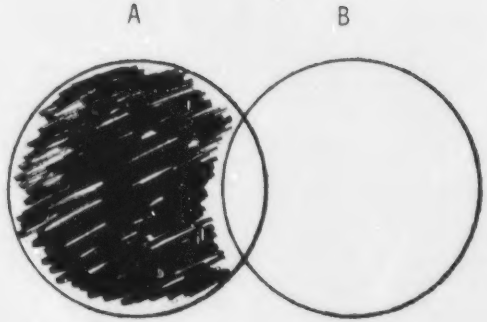
COMBINE DESCRIPTORS USING
LOGIC TERMS



A .OR. B



A .AND. B



A .NOT. B

POSSIBLE ONLY BECAUSE OF COORDINATE INDEXING

SMALL GROUP ACTIVITY: MAIN IDEA SYSTEM AND WRITING COMPUTER LOGIC

Notes to the Instructor

It is suggested that the trainees be divided into groups of from two to five. This activity might also be done individually if the total number of trainees is small enough and time permits. Each trainee or small group should be given one of the questions below with instructions to select appropriate descriptors from the ERIC Thesaurus and organize them using the "main idea system." If a computer terminal and a retrieval specialist is available, these descriptors may be searched via computer to see if they would yield desired results. If computer facilities are not available, monthly indexes of RIE and CIJE should be available for trainees to look at items listed under the descriptors they have suggested. Please note that each participant will need access to an ERIC Thesaurus for this exercise.

Sample Questions:

1. A new "Plan A" Resource Teacher for a junior high school needs information on special education teaching methods, curriculum, and materials.
2. A first grade teacher needs a bibliography of information and materials on reading readiness at preschool and first grade level.
3. A school nurse needs information on effective methods of teaching drug abuse education in the elementary school.
4. An elementary teacher (K-7) has requested strategies for using behavior modification in the classroom.
5. A teacher needs techniques for developing listening skills in her elementary children.
6. An ESC consultant needs information on innovative open space high schools.
7. A principal needs information on school law related to student dress codes.
8. An ESC consultant needs information on evaluation of middle school program.
9. An assistant superintendent wants information on innovative high school building designs.

SEARCH STRATEGIES FOR SAMPLE QUESTIONS

Below are listed search strategies for the sample questions suggested for the small group activity previously outlined. Descriptors are combined in main idea groups (sequences of descriptors connected with ORs) and show coordination of groups with the logic term, AND. The number of postings retrieved using each strategy is also given and five sample document titles and numbers are listed. Please note that these strategies are in no way prescriptive. They are intended only to illustrate one possible set of descriptors and strategy for each question.

1. A new "Plan A" Resource Teacher for a junior high school needs information on special education teaching methods, curriculum, and materials.

Strategy:

((Special Education OR Exceptional Child Education) AND (Teaching Methods OR Teaching Techniques OR Resource Units OR Resource Materials OR Unit Plan OR Instructional Materials OR Curriculum)) AND (Grade 7 OR Grade 8 OR Grade 9 OR Secondary School Students OR Middle Schools OR Junior High Schools OR Intermediate Grades OR Junior High School Students)

Postings: 40

Sample:

ED- EJ048871
TI- CEC ERIC's THE NOW WAY TO KNOW: ME NOW-LIFE SCIENCES FOR THE MENTALLY RETARDED

ED- EJ045922
TI- COMPUTER ASSISTED INSTRUCTION FOR DEAF STUDENTS

ED- ED051606
TI- TEACHING GIFTED STUDENTS ENGLISH USAGE IN GRADES SEVEN THROUGH NINE.

ED- ED048697
TI- LITERATURE: CURRICULUM GUIDE FOR TEACHING GIFTED CHILDREN LITERATURE IN GRADES NINE THROUGH TWELVE.

ED- EJ021514
TI- TEACHING THE UNTEACHABLES

2. A first grade teacher needs a bibliography of information and materials on reading readiness at the preschool and first grade level.

Strategy:

(Instructional Materials OR Resource Materials OR Classroom Materials OR Instructional Aids OR Educational Resources OR Information Sources) AND (Reading Readiness)

Postings: 26

Sample:

ED- ED054866
TI- SEL/PROJECT LANGUAGE. LEVEL II, KINDERGARTEN, VOLUME II 17-32).

ED- EJ047016
TI- TELL ME A STORY

ED- ED049024
TI- GUIDE TO MATERIALS FOR READING INSTRUCTION. 1971 EDITION.

ED- EJ037126
TI- THE TEACHING OF READING

ED- ED059837
TI- FORTY STATES INNOVATIVE TO IMPROVE SCHOOL READING PROGRAMS.

3. A school nurse needs information on effective methods for teaching drug abuse education in the elementary school.

Strategy:

(Drug Abuse OR Drug Education OR Marihuana OR Narcotics OR Drug Addiction OR Lysergic Acid Diethylamide) AND (Elementary Education OR Elementary Grades OR Elementary Schools OR Grade 1 OR Primary Education OR Primary Grades OR Grade 2 OR Grade 3 OR Grade 4 OR Grade 5 OR Grade 6)

Postings: 22

Sample:

ED- ED069841
TI- REPORT OF THE NEW YORK STATE COMMISSION ON THE QUALITY, COST AND FINANCING OF ELEMENTARY AND SECONDARY EDUCATION. VOLUME 2.

ED- EJ061450
TI- DRUG USAGE AT THE SECONDARY AND PRIMARY SCHOOL LEVELS

ED- ED067515
TI- DRUG EDUCATION. PREP-36.

ED- ED058097
TI- DRUG CRISIS: SCHOOLS FIGHT BACK WITH INNOVATIVE PROGRAMS. EDUCATION U.S.A. SPECIAL REPORT.

ED- ED057007
TI- PERCEPTIONS AND ATTITUDES OF GRADUATE STUDENTS CONCERNING DRUG USE AND ABUSE IN ELEMENTARY AND SECONDARY SCHOOLS.

4. An elementary teacher (K-7) has requested strategies for using behavior modification in the classroom.

Strategy:

((Behavior Change) AND (Class Management OR Classroom Techniques OR Techniques)) AND (Elementary Schools OR Elementary School Students OR Elementary Education OR Primary Education OR Primary Grades OR Kindergarten OR Grade 1 OR Grade 2 OR Grade 3 OR Grade 4 OR Grade 5 OR Grade 6 OR Grade 7)

Postings: 15

Sample:

ED- EJ056839
TI- CHILDREN SEE THEMSELVES AS OTHERS SEE THEM

ED- ED060064
TI- THE MAGIC EAR: ANOTHER APPROACH TO AUTOMATED CLASSROOM CONTROL.

ED- ED049337
TI- EFFECTS OF CONTINGENT REINFORCEMENT FOR ATTENDING BEHAVIOR ON WORK ACCOMPLISHED.

ED- ED049469
TI- REINFORCING PRODUCTIVE CLASSROOM BEHAVIOR: A TEACHER's GUIDE TO BEHAVIOR MODIFICATION. FINAL REPORT.

ED- ED041966
TI- A CONTINGENCY MANAGEMENT PROGRAM IN URBAN SCHOOL CLASSROOMS.

5. A teacher needs techniques for developing listening skills in her elementary children.

Strategy:

((Learning Activities OR Enrichment Activities OR Games OR Classroom Games OR Educational Games OR Techniques OR Teaching Techniques OR Teaching Methods OR Teaching Procedures OR Teaching Programs) AND (Elementary Schools OR Elementary School Students OR Elementary Education OR Grade 4 OR Grade 5 OR Grade 6)) AND (Aural Learning OR Aural Stimuli OR Listening Comprehension OR Listening OR Listening Skills OR Listening Habits OR Auditory Perception OR Auditory Discrimination OR Auditory Training)

Postings: 25

Sample:

ED- EJ035678
TI- TEACHING EARLY ELEMENTARY CHILDREN WITH READING DISABILITY

ED- ED063314
TI- THE EFFECT OF TRAINING IN LISTENING TO SPEEDED DISCOURSE ON LISTENING COMPREHENSION.

ED- ED049257
TI- A COMPARISON OF THE EFFECTIVENESS OF THREE PROGRAMS OF ELEMENT SCHOOL SPELLING.

ED- ED049230
TI- USING COMPUTER BASED RESOURCE GUIDES TO TEACH THE SKILLS OF LISTENING.

ED- ED049225
TI- THE EFFECT OF COMPRESSED SPEECH ON READING AND LISTENING ABILITIES OF SIXTH-GRADE CHILDREN.

6. An ESC consultant needs information on innovative open space high schools.

Strategy:

(Open Education OR Open Plan Schools) AND (Secondary Education OR Secondary Schools OR Secondary Grades OR High Schools OR High School Students OR Secondary School Students)

Postings: 23

Sample:

ED- EJ066129
TI- SECONDARY EDUCATION AS A PHASE IN LIFE-LONG EDUCATION

ED- EJ063471
TI- THE TRUE SAGA OF HOW ONE TEACHER MET THE CHALLENGE AND CREATED AN OPEN CLASSROOM IN A TRADITIONAL HIGH SCHOOL

ED- ED069696
TI- AN EVALUATION OF THE OPEN CAMPUS POLICY AT INTERLAKE SENIOR HIGH SCHOOL.

ED- ED068996
TI- INNOVATIVE INSTRUCTIONAL STRATEGIES FOR SPEECH COMMUNICATION.

ED- ED067753
TI- THORNLEA: A CASE STUDY OF AN INNOVATIVE SECONDARY SCHOOL. PROFILES IN PRACTICAL EDUCATION NO. 6.

7. A principal needs information on school law related to student dress codes.

Strategy:

(Dress Codes) AND (Board of Education Policy OR Discipline Policy OR School Law OR School Policy OR Student Rights OR School Administration)

Postings: 20

Sample:

ED- EJ063301
TI- NEEDED: BETTER LIABILITY PROTECTION

ED- EJ063292
TI- HAIR, THE CONSTITUTION AND THE PUBLIC SCHOOLS

ED- ED065942
TI- GUIDELINES FOR STUDENTS RIGHTS AND RESPONSIBILITIES.

ED- ED064795
TI- MINIMUM STANDARDS FOR STUDENT CONDUCT AND DISCIPLINE, INCLUDING SUGGESTED GUIDELINES AND MODEL CODES. OREGON ADMINISTRATIVE RULES 21-050 -- 21-085.

ED- EJ057543
TI- THE TEACHER AS CITIZEN AND EMPLOYEE. EXPANDED BUT NOT UNLIMITED FREEDOM

8. An ESC consultant needs information on evaluation of middle school programs.

Strategy:

(Middle Schools) AND (Evaluation OR Evaluation Criteria OR Evaluation Methods OR Evaluation Techniques OR Program Evaluation)

Postings: 23

Sample:

ED- ED060481
TI- OCCUPATIONAL AWARENESS IN THE URBAN MIDDLE SCHOOL. A VOCATIONAL GUIDANCE INSTITUTE, SEPTEMBER, 1969 TO MAY, 1970. OCCUPATIONAL AWARENESS IN THE URBAN MIDDLE SCHOOL. A VOCATIONAL GUIDANCE INSTITUTE, SEPTEMBER, 1970 TO MAY, 1971.

ED- ED057083
TI- INITIAL ASSESSMENT OF THE INTENSIFIED LEARNING PLAN.

ED- EJ046713
TI- STEPS - A SCIENCE TEST FOR EVALUATION OF PROCESS SKILLS

ED- EJ045575
TI- REPORT: HOME ECONOMICS IN THE MIDDLE SCHOOLS

ED- ED064754
TI- STRUCTURAL EFFECTS ON SCHOOL BEHAVIOR: A COMPARISON OF MIDDLE SCHOOL AND JUNIOR HIGH SCHOOL PROGRAMS.

9. An assistant superintendent wants information on innovative high school building designs.

Strategy:

(Building Innovation OR High School Design) AND (High Schools OR Secondary Grades OR Secondary Education OR Senior High Schools)

Postings: 18

Sample:

ED- EJ063243
TI- CLOSED CAMPUS WITH EXTRAS. SCHOOL OF THE MONTH: MARSHALL SR. HIGH

ED- ED067738
TI- THE NEW SCHOOLS. DESIGN & PLANNING SERIES.

ED- EJ054013
TI- MIDDLE SCHOOL BUTTERFLY DESIGN HAS ROOF WITH CABLE SUPPORTS. TWO LOW-COST HIGH SCHOOLS OPT FOR AIR CONDITIONING

ED- ED047063
TI- PARKWAY PROGRAM.

ED- ED043266
TI- ADAPTING FOREIGN LANGUAGE PROGRAMS TO NEW EDUCATIONAL DESIGNS.

APPENDIX

Agenda

Information Consultant Training

August, 1972

Morning Session

Review of TIS Project
TIS Organizations and Functions
Search Techniques

Afternoon Session

TIS Record Keeping Forms
Question Negotiation Procedures
Delivery of Information to Client
Follow-up Activities
Evaluation of Workshop

EDUCATIONAL INFORMATION CONSULTANT TRAINING

Session I

Dr. Ann Bennett
Region 10 Education Service Center

9:30 - 9:45 OVERVIEW OF TRAINING ACTIVITIES

9:45 - 10:30 THE ERIC SYSTEM
Carol Brown, Information Specialist
TIS Central
Austin, Texas

A. ERIC
  1) Introduction to ERIC (RIE and CIJE)
    a) Types of information in ERIC
    b) Sources of information for ERIC
    c) Clearinghouses' specialized areas/functions
  2) Using ERIC
    a) Thesaurus--coordinate indexing
    b) Subject, author, institution indexes
    c) Clearinghouse organization in RIE
    d) Resumes
    e) Microfiche and hardcopy
    f) CIJE organization and journal availability
  3) Computer application of search strategy
B. Other TIS resources

10:45 - 11:45 TIS PROCESSES IN THE T.C.

A. Role of Information Consultant
  1) Public relations in area
  2) Question negotiation
  3) Delivery of information
  4) Access to technical assistance
  5) Analysis of needs for TIS, TC, and ESC
  6) Identification and use of local resources
B. Forms
  1) Question negotiation form
  2) Quick reference form
  3) Evaluation form
  4) Request record log
  5) Public relations record log
C. Record Keeping
  1) Request record log
    a) Record all followup actions
    b) Send copy of log to TIS monthly
  2) Question negotiation form
    a) One copy to TIS
    b) One file copy for information consultant
    c) One copy to appropriate institution (school, ESC, or TC)
  3) Public relations record log
    a) One copy to TIS monthly
  4) TIS Monthly Report to Region 10, E.S.C.
    b) Send to E.S.C. monthly as indicated on the form

TIS ORGANIZATIONS AND FUNCTIONS

A. TIS Central Unit
   1) Acquisition
   2) Retrieval
   3) Packaging
   4) Coordination of state network
B. Delivery System Network
   1) Teacher Centers
   2) Education Service Centers
   3) Texas Education Agency

11:45 - 1:15 VIEWING OF ACADEMIC SERVICES DEPARTMENT'S EDUCATIONAL INFORMATION CENTER

LUNCH

1:15 - 3:00 QUESTION NEGOTIATION PROCEDURE (Instruction)

A. Establish Rapport With Client
B. Describe Client (Position, Institution, etc.) For Records
C. Ask Client To Describe Problem Area
   1) How information will be used--purpose
   2) Expand, qualify, narrow the problem
   3) Define ambiguous or unclear terms
   4) Agree on list of 5-10 keywords
   5) Establish age/grade levels, subject area, etc.
   6) Restate problem to reach consensus
D. How Much Information Needed?
E. What Kind of Information Needed?
F. What Searching Has Client Already Done?

DELIVERY OF INFORMATION TO CLIENT

A. Review Briefly the Client's Request
B. Describe Contents of the Package Being Delivered
C. Discuss Limitations of the Package
D. Review Recommendations and Conclusions
E. Seek Client's Reaction

At this point the awareness level of an Educational Information Consultant's responsibilities to the client is concluded. From this point on the Educational Information Consultant works with the client on a developmental level. The Information Consultant has the responsibility of (a) personally providing to the client whatever assistance and encouragement is needed in developing/implementing (moving) on the information received, (b) putting the client in touch with a person with appropriate expertise to provide the necessary developmental level assistance.

In future meetings we will be working with and sharing ideas concerning effective developmental level strategies.

TEXAS INFORMATION SERVICE ORIENTATION FOR THE DALLAS T.E.C. FACULTY MEMBERS

(Suggested Schedule)

:30 - 3:45 GENERAL TIS PRESENTATION
(Ann Bennett)

:45 - 4:15 PRESENTATION BY RESOURCE TEACHERS

I. On-demand Searches
a. Contact Educational Information Consultant
(Resource Teachers--Stress here that all information requests are important and receive immediate attention)
* b. Filling Out the User Request Form
(Show sample of form and discuss the kinds of information asked for on the form)
* c. Search Returned
(Show sample of a search--explain the individual abstracts of documents and journal citation listings)
d. Follow Up Activity
* (Show microfiche order form)
* (Show microfiche sample)
* (Demonstrate use of reader)
e. Technical Assistance Offered in Response to Individual Requests
(Explain)
* f. Evaluation
(Show form and explain process and confidential treatment of evaluation by TIS Central)

II. Local Sources of Available Information
** a. Discuss Region 10 E.S.C.'s Educational Information Center materials.
(Use your listing for reference)
* b. The TSTA Tennyson Library Service
(Show Sample kit--Refer to brochure for additional information)
c. Any Other Local Data Bases of Which You Are Aware and Plan To Use

:15 - 4:30 OPEN FOR QUESTIONS AND ANSWERS

* I can supply these materials for your presentation and/or display

** Please use your copies of this material

Agenda - Sept. 5 & 6, 1973

TIS/EIC Training Conference

First Day

9:00-9:30	Registration and Coffee
9:30-10:00	Opening Remarks (Leo Lambert, Project Manager)
10:00-10:30	TIS Project Background and Linker Concept
10:30-10:45	Break
10:45-11:15	ERIC Slide/Tape
11:15-12:00	Definition and Description of EIC
12:00- 1:15	Lunch
1:15-2:30	Role of the EIC
2:30-2:45	Break
2:45-4:00	Using the ERIC Thesaurus

Second Day

8:30-9:00	Computer Processes
9:30-10:00	Group Activity in Computer Logic
10:00-10:15	Break
10:15-11:30	Simulation in Logic Writing
11:30- 1:00	Lunch
1:00-2:00	Demonstrate Computer Process
2:00-2:30	Delivery and Followup
2:30-3:00	Summary Session

TEXAS INFORMATION SERVICE PROJECT

By Joel P. Pittman

Submitted in partial fulfillment
of the requirements for the degree
of Doctor of Education, Nova University

Dallas Cluster

Dr. Frank Alexander

Mini Practicum

June 25, 1973

The staff of F. P. Caillet Elementary School participated in the Texas Information Service (TIS) project from November, 1972 through May, 1973. In May, a questionnaire was administered to the thirty-six participants. Thirty-one of these instruments were completed and returned. (See Appendix A) The evaluation instrument indicated the opinions of the participants as to the affect the availability of information ard materials has had on teacher behavior and/or teacher attitude. Also, the types of information materials requested were identified. An assessment of the request procedures used during the project was also made.

IMPLEMENTATION PROCEDURES

The following procedures were used for implementing the project at F. P. Caillet Elementary School, Dallas Independent School District:

1. Planning Meeting: Principal and Information Consultant (Region X Service Center Consultant).
   - 1.1 Purpose of Meeting.
     - 1.1.1. Plan orientation procedures for staff.
     - 1.1.2. Formulate method of collecting search or information requests.
     - 1.1.3. Establish dissemination procedure.
   - 1.2 Time: 3 hours.
2. Staff Meeting: Principal, Information Consultant, and Caillet Staff.
   - 2.1. Purpose of Meeting.
     - 2.1.1. Orientation of objectives, services, and products available.
     - 2.1.2. Procedure to follow in making information requests.
     - 2.1.3. Method of Dissemination.
   - 2.2. Time: 2 hours.
3. Assessment Meeting: Principal, Information Consultant, and Director of Dallas ISD Teacher Education Centers.
   - 3.1. Purpose of Meeting.
     - 3.1.1. Determine types of resources being requested.
     - 3.1.2. Determine number of requests being made.
   - 3.2. Time: 2 hours.
4. Development of Assessment Instrument.
   - 4.1. Purpose of Instrument.
     - 4.1.1. To determine what effect participation in TIS has had on teaching-learning processes based on opinions of staff members.
     - 4.1.2. Identify types of information requested.
     - 4.1.3. To determine if the amount of time expended in the participation of the TIS Project can be justified.
   - 4.2 Time: 8 hours.

Assessment Instrument (Appendix A)

Texas Information Services Project

In an effort to determine the usefulness of the information materials which you received through TIS project we will appreciate your completing this questionnaire. If you have further comments, criticisms, or suggestions, we welcome them. Thank you for your cooperation.

1. To determine for what purpose you requested information and also in what way you actually used the information received, please indicate in the first column your intended purpose and in the second, your actual use.

Intended Purpose	Actual Use	
( )	( )	Using in classroom
( )	( )	Planning a new program
( )	( )	Reviewing a program
( )	( )	Writing a report or proposal
( )	( )	Other_____ (Please Specify)

Directions: Check only one alternative for each question.

	Great	Above Average	Average	Small	Not a All
2. To what extent do you consider the services of TIS to be useful for your professional functioning?	( )	( )	( )	( )	( )

	Great	Above Average	Average	Small	Not at All
3. To what extent did information sent by TIS increase your understanding of the knowledge requested?	( )	( )	( )	( )	( )
4. To what extent do you think the information furnished by TIS has assisted you in classroom instruction?	( )	( )	( )	( )	( )
5. To what extent did you find the procedure of requesting information satisfactory?	( )	( )	( )	( )	( )
6. To what extent do you think the information received affected or changed classroom practice, or learning conditions?	( )	( )	( )	( )	( )

7. The information package sent to you arrived:

( ) Earlier than expected

( ) In time for your purpose

( ) Late but still useful

( ) Too late for your purposes

8. What types of resources were suggested to you?

( ) Human resources

( ) Pre-packaged materials

( ) Hard copy

( ) Microfiche

9. If information received was used in areas other than classroom practices, please indicate:

( ) Special Education

( ) Career Education

( ) Test measurement (example: Educatio
(Personality, etc.

( ) Other, specify_____

10. Please indicate the usefulness of the information you received.

( ) Provided new ideas

( ) Provided additional alternatives for decision making

( ) Increased awareness of other problems to be encountered

( ) Increased awareness of scope of materials available

( ) Reinforced present thinking

( ) Other

( ) None was of assistance

	Great	Above Average	Average	Small	Not a All
11. As a classroom teacher, to what extent do you think that participation in the TIS project has assisted you in improving your teaching practice techniques?	( )	( )	( )	( )	( )
12. To what extent do you think the TIS project is a feaseable Staff Development alternative?	( )	( )	( )	( )	( )

13. If given the choice would you suggest that an educational staff participate in the TIS project?

YES ( ) NO ( )

14. What comments, criticisms, or suggestions can you offer about Information Search and/or TIS Service?

_____

_____

_____

CONCLUSION AND SUMMARY

Conclusion - The conclusions which follow were drawn on the basis of careful treatment and analysis of data collected to ascertain if teachers felt that utilization of an educational information retrieval system did bring about changes in their teaching behavior:

1. It may be concluded that the faculty of F. P. Caillet School has positive feelings about the affect that participation has had on changing teacher behavior and improving teaching techniques.

2. It may be concluded that the TIS participants feel if other teachers are given the opportunity, they should utilize an educational information retrieval system.

3. It may be concluded that the TIS project is one avenue that can be used to meet the individual needs of teachers.

Summary - In summary, this practicum was developed to determine if teachers utilizing an educational information retrieval system would indicate their teaching behavior was positively affected by using such a system (TIS).

An appropriate instrument was designed to assess individual opinions of the participants. The findings indicate teachers believe their teaching is positively affected through utilization of an educational information retrieval system.

Teachers believe that utilizing an educational information retrieval system is one way that educational change can take place.

These findings seem to indicate educators no longer have the option of providing a specific program for teaching improvement, but must offer viable educational alternatives to meet individual needs of teachers.

RECOMMENDATIONS

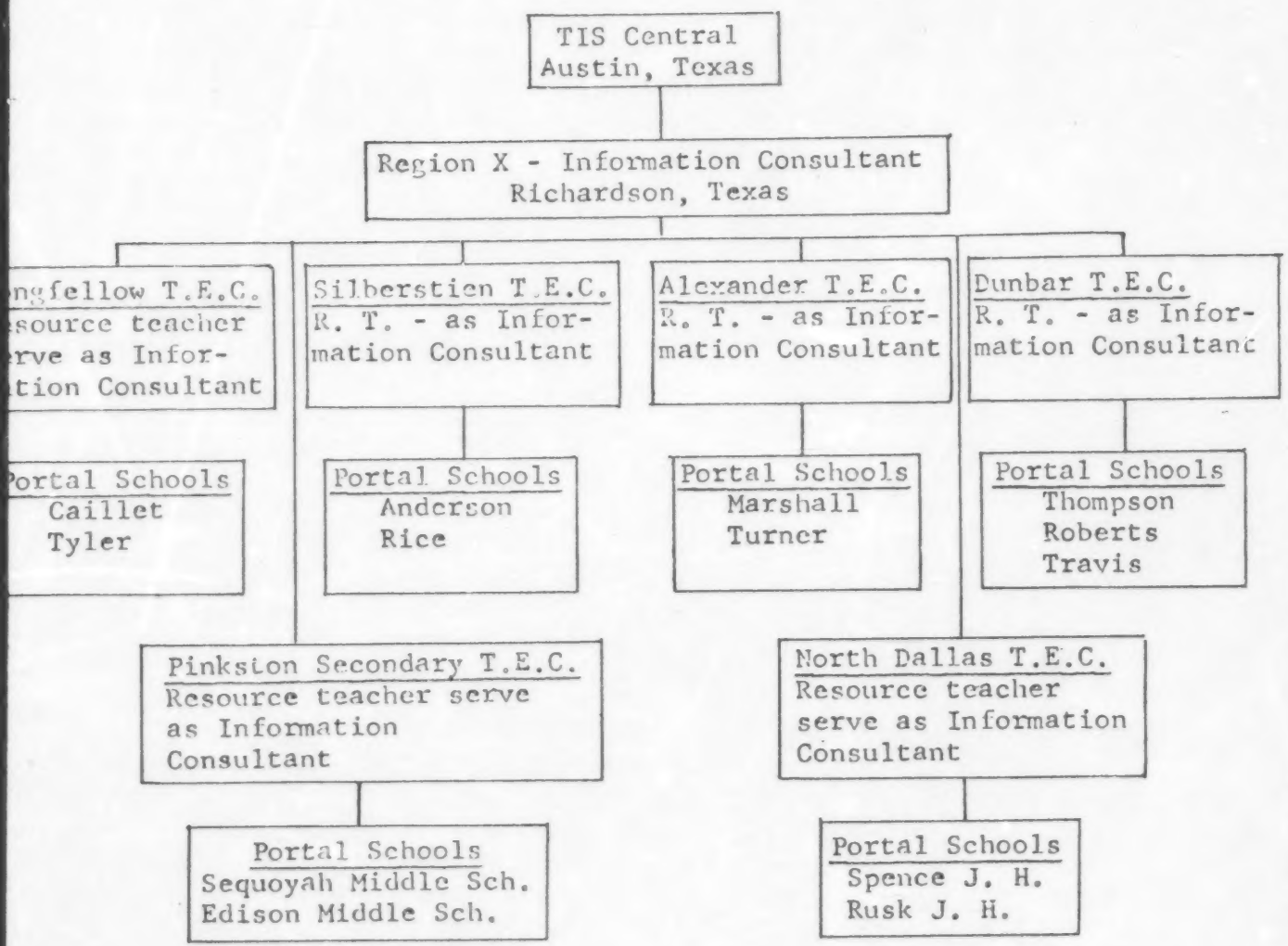
This study provides information regarding the effect of utilization of an educational information retrieval system on the teaching behavior of teachers. Based on the findings of this study, the following recommendations are made:

1. It is recommended that the TIS Project be expanded to include six Dallas Teacher Education Centers and their portal schools be included in the TIS project.

2. It is recommended that one of the Region X Service Centers' staff members continue to serve as Informational Consultant for the Dallas TIS project.

3. It is recommended that resource teachers in the teacher education centers be trained and serve as Information Consultants for each center and its portal schools. (Shown in Table II.)

PROJECT TIS - DALLAS TEACHER EDUCATION CENTERS



TEXAS INFORMATION SERVICE

INFORMATION CONSULTANT TRAINING WORKSHOP
Evaluation Instrument, August, 1972

Name _____

Position _____

We are interested in obtaining information on the general effectiveness, strengths and weaknesses of our training program. We, therefore, are requesting your cooperation in completing this brief evaluation questionnaire. Any information you provide us will be used in improving our services, and will be held in confidence.

I. Listed below are the behavioral objectives for this workshop. Please make a subjective judgement about your own ability to perform the specified behaviors as a result of this workshop. Mark your response to each item by circling the number on the scale that best describes your own judgement. If you feel a need to explain your rating on any objective, you may do so in the space provided.

1. The trainee will be able to explain to educators in his region the objectives, audiences, resources, services, and products of the TIS system.

   My ability to perform this behavior as a result of this training is:

Very poor	poor	fair	good	excellent
1	2	3	4	5

   Explanation: _____

   _____

2. The trainee will be able to explain to educators in his region the organization and functions of the components of the TIS network: the TIS Central Unit; the Delivery System Network; the Information Consultant.

   My ability to perform this behavior as a result of this training is:

Very poor	poor	fair	good	excellent
1	2	3	4	5

   Explanation: _____

   _____

3. The trainee will be able to use appropriate search techniques in collecting information to respond to client questions.

My ability to perform this behavior as a result of this training is:

Very poor	poor	fair	good	excellent
1	2		4	5

Explanation: _____

_____

4. The trainee will be able to use TIS record keeping forms correctly.

My ability to perform this behavior as a result of this training is:

Very poor	poor	fair	good	excellent
1	2	3	4	5

Explanation: _____

_____

5. The trainee will be able to interview effectively prospective clients.

My ability to perform this behavior as a result of this training is:

Very poor	poor	fair	good	excellent
1	2	3	4	5

Explanation: _____

_____

6. The trainee will be able to conduct effectively an interview in which he delivers information to the client.

My ability to perform this behavior as a result of this training is:

Very poor	poor	fair	good	excellent
1	2	3	4	5

Explanation: _____

_____

II. Listed below are the same objectives. This time we would like you to rate the quality of the workshop presentation for each objective.

1. The trainee will be able to explain to educators in his region the objectives, audiences, resources, services, and products of the TIS system.

With respect to this objective the quality of the presentation was:

Very poor	poor	fair	good	excellent
1	2	3	4	5

2. The trainee will be able to explain to educators in his region the organization and functions of the components of the TIS network: the TIS Central Unit; the Delivery System Network; the Information Consultant.

With respect to this objective the quality of the presentation was:

Very poor	poor	fair	good	excellent
1	2	3	4	5

3. The trainee will be able to use appropriate search techniques in collecting information to respond to client questions.

With respect to this objective the quality of the presentation was:

Very poor	poor	fair	good	excellent
1	2	3	4	5

4. The trainee will be able to use TIS record keeping forms correctly.

With respect to this objective the quality of the presentation was:

Very poor	poor	fair	good	excellent
1	2	3	4	5

5. The trainee will be able to interview effectively prospective clients.

With respect to this objective the quality of the presentation was:

Very poor	poor	fair	good	excellent
1	2	3	4	5

6. The trainee will be able to conduct effectively an interview in which he delivers information to the client.

With respect to this objective the quality of the presentation was:

Very poor	poor	fair	good	excellent
1	2	3	4	5

CONFERENCE EVALUATION FORM

Rate each of the following items on a scale of 1 to 5, by placing a check on the point on the scale which most clearly expresses your reaction.

1. The manner in which this conference was organized and carried on was:

   Excellent. . . . . Poor

   1 2 3 4 5

2. What is your reaction to the total number of sessions of the conference:

   Far too many. . Far too few

   1 2 3 4 5

3. In regard to each session, the length was:

   Far too lengthy . . . . . Far too short

   1 2 3 4 5

4. The facilities were:

   Excellent . . . . . Poor

   1 2 3 4 5

5. The subject of this activity was covered:

   Extremely well Extremely poorly

   1 2 3 4 5

6. How well were your specific questions dealt with:

   Completely . . . Not at all

   1 2 3 4 5

7. To what degree do you feel comfortable with the knowledge and technique acquired:

   Totally . . . . . Not at all

   1 2 3 4 5

8. Do you feel a need for follow-up activity in this area:

   Yes___ No___

9. Please rate the conference, over all, on its value to you.

   Great Value . . . . . No value

   1 2 3 4 5

10. Please explain, as concisely as possible, your reason for the rating in 9.

11. What, in your opinion, was the least valuable aspect of the conference?

12. What, in your opinion, was the most valuable aspect of the conference?

13. Please use the space below to make any suggestions or criticisms that you think will be of value to the staff in planning future activities of this nature.

TRAINING EVALUATION FORM

1. A "knowledge linker" serves to join the information base with:

____Educators
____Teacher Centers
____Educational service centers
____Texas Education Agency
____Universities
____all of the above
____none of the above

2. The Texas Information Service has only ERIC resources.

true____ false____

3. TIS services include:(check as many as needed)

____prepackaged information
____individual searches
____microfiche duplication
____programs and human resources list
____reviews of the literature
____program planning
___all of the above
___none of the above

4. Number in proper order of sequence the process of the TIS search and delivery system:

___retrieval
___question negotiation
___delivery to client
___user request
___translation into searchable terms
___assistance in implementation

5. Which part of the ERIC system indexes and abstracts documents:

___Central ERIC

___the Clearinghouses

___EDRS

___information services

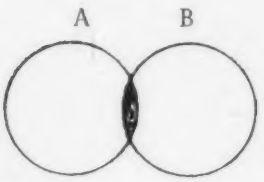
6. The principle of coordinate indexing of documents means each document is assigned a descriptor for each aspect or parameter of its subject.

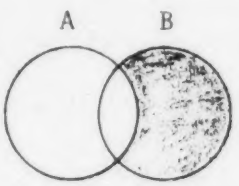
true____ false___ If false, explain why.

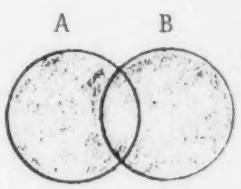
7. Boolean logic terms (AND, OR, AND NOT) link sets of documents indexed by various ERIC descriptors.

The diagrams below show sets indicated by circles labeled "a" and "b."

Which logical operator is illustrated by each diagram?







8. What are these abbreviations used for in the ERIC Thesaurus:

NT _____

RT _____

SN _____

BT _____

UF _____

9. Using the "main idea system," organize descriptors to deal with the main ideas in this question:

"What enrichment materials or programs are available in mathematics for gifted students?"

List "main ideas" across the page and choose appropriate descriptors from the list provided. Use the identifying numbers to indicate descriptors for each "main idea." You need not use all descriptors listed.

1. able students
2. academic achievement
3. arithmetic curriculum
4. classroom materials
5. curriculum
6. curriculum enrichment
7. elementary school mathematics
8. enrichment
9. enrichment activities
10. enrichment programs
11. flexible classrooms
12. gifted
13. high achievers
14. honors curriculum
15. mathematical enrichment
16. mathematics
17. mathematics curriculum
18. mathematics materials
19. mathematics teachers
20. middle schools
21. modern mathematics
22. remedial mathematics
23. secondary school students
24. superior students
25. talented students

QUESTION NEGOTIATION EVALUATION FORM

Observer Checklist

For each of the following items, circle the letter that most nearly corresponds with your observation concerning the interaction between EIC and Client. Be sure to answer each item.

1. Did the EIC help the Client state what his problem was?

   a. No, not at all
   b. Yes, helped somewhat
   c. Yes, helped considerably
   d. Yes, actively helped
   e. Cannot say

2. Did the EIC help the Client clarify what he needed?

   a. No, didn't help at all
   b. Yes, vaguely
   c. Yes, somewhat
   d. Yes, a great deal
   e. Cannot say

3. Did the EIC listen to the Client's problem?

   a. Didn't pay attention
   b. Listened, but seemed to be easily distracted
   c. Paid close attention
   d. Don't know

4. Did the EIC communicate to the Client that he understood the problem?

   a. Communicated this very well
   b. Mostly communicated this
   c. Partially communicate this
   d. Didn't communicate this at all
   e. Don't know

5. To what extent did the questions asked by the EIC actually help the Client to clarify his problems?

   a. Didn't help at all
   b. Helped somewhat
   c. Was extremely helpful
   d. Couldn't tell

6. Did the EIC ask questions which indicated that he had a clear grasp of what the Client had said?

   a. Rarely
   b. Occasionally
   c. Frequently
   d. Regularly
   e. Can't say

7. Did the EIC make any effort to find out about the Client's personal motivation, feelings, or attitudes toward the problem?

   a. No effort
   b. Little effort
   c. Some effort
   d. A great deal of effort
   e. Cannot say

8. Did the EIC indicate through his general demeanor, posture, or gestures (such as nodding his head, murmuring "uh-huh," smiling, etc.) that he was encouraging the Client to continue to elaborate and discuss the problem?

   a. Not at all
   b. Intermittently
   c. Frequently
   d. Very frequently
   e. Cannot say

9. Did the EIC ask the Client repetitive questions?

   a. Very frequently
   b. Frequently
   c. Occasionally
   d. Rarely
   e. Don't know

(over)
FWLERD 1/72

10. During the interview, did the EIC restate or paraphrase the Client's problem correctly?

    a. Completely correct
    b. Mostly correct
    c. Partially correct
    d. Not at all
    e. Don't remember

11. Did the EIC ask whether the Client was familiar or had any previous experience with this type of problem?

    a. Yes
    b. Hinted
    c. No
    d. Don't remember

12. Did the EIC ask the Client what assistance he expected to get from the EIC?

    a. Yes
    b. No
    c. Don't remember

13. Did the Client and the EIC agree on the course of action to be taken (that is, agree on what information was needed and when) before terminating their interview?

    a. Yes
    b. Partially
    c. No
    d. Don't remember

    If "Partially" or "No," explain why:

14. Did the Client agree that the search terms suggested by the EIC were descriptive of the problem they had discussed?

    a. No, none were descriptive
    b. Yes, agreed some were
    c. Yes, agreed most were
    d. Yes, agreed all were
    e. Don't remember

The following questions concern the Client's reactions to questions asked by the EIC. Circle the letter that most nearly corresponds with your opinion of the interaction between EIC and Client.

15. How did the Client react to the EIC's questions?

    a. Unresponsive
    b. Slightly responsive
    c. Responsive
    d. Extremely responsive
    e. Don't remember

16. How well did the Client appear to understand the EIC's questions?

    a. Clearly
    b. With some understanding
    c. Vaguely
    d. Not at all
    e. Cannot say

17. How did the Client appear at the conclusion of the interview.

    a. Lost
    b. Not fully satisfied
    c. Satisfied
    d. Don't remember

Comments: (Use other side, if necessary.)